



Summary

Main Features

LABOUR STATISTICS NEWS

EMPLOYEE EARNINGS AND HOURS

Preliminary results from the 2004 Survey of Employee Earnings and Hours were released on 8 December via the ABS web site. This electronic publication (cat. no. 6305.0.55.001) replaces the printed publication (cat. no. 6305.0) released previously. The Survey of Employee Earnings and Hours collected information from a sample of employers about the earnings, hours paid for, method of setting pay, and other selected characteristics of their employees. Final estimates from the survey will be published in **Employee Earnings and Hours, Australia, May 2004** (cat. no. 6306.0), expected to be released in March 2005.

LABOUR PRICE INDEX

From the September quarter 2004 issue, released on 17 November 2004, **Wage Cost Index, Australia** (cat. no. 6345.0) will be issued under the title **Labour Price Index, Australia**. The new name identifies the publication as one of the price indexes produced by the ABS, and also reflects the introduction of non-wage price indexes, in addition to the wage price indexes, and their aggregation into overall labour price indexes. For more information, see the spotlight on the Labour Price Index in this publication.

LABOUR THEME PAGE

The ABS Labour Theme Page provides a guide to the range of ABS statistics on the labour market, as well as links to the latest data released.

RELEASE OF UPDATES TO CONCEPTS SOURCES AND METHODS

Labour Statistics - Concepts, Sources and Methods has been updated further, to coincide with the release of results from the Survey of Employee Earnings and Hours. On December 8, the following chapters were updated: 2, 12, 24 and 26. Additional chapters will be updated in 2005 and these will be announced in subsequent issues of this publication.

IMPLEMENTATION OF COMPUTER ASSISTED INTERVIEWING

Computer assisted interviewing (CAI) was progressively implemented into the Labour Force Survey (LFS) between October 2003 and August 2004. A Technical Report in this issue of Australian Labour Market Statistics outlines the analyses that were conducted on each month's data to monitor the implementation. These analyses confirmed that the change in interview method has not materially affected the aggregate estimates for any month.

SUPPLEMENTARY SURVEYS ON LABOUR TOPICS

The Monthly Population Survey comprises the Labour Force Survey and a range of supplementary surveys, which provide detailed information on a range of topics. Results from the survey on education and work were recently released in **Education and Work, Australia** (cat. no. 6227.0). The results of this survey are outlined in the Recent Release section of this publication.

ABS EMAIL NOTIFICATION SERVICE

By subscribing to this free service, you will be kept informed via email of the latest releases of ABS products. To subscribe, follow the link from the ABS home page <<https://www.abs.gov.au>>, provide your email address, and select your topics of interest.

CHANGES IN THIS ISSUE

This issue of **Australian Labour Market Statistics** reflects the renaming of the Wage Cost Index as the Wage Price Index (which is part of the broader Labour Price Index).

In addition to presenting participation rates for all persons aged 15 years and older, this issue presents participation rates for persons aged

15-64 years in the Key Measures table of the Labour Market Summary.

Recent and upcoming statistical releases

Release date/title of publication	Reference period	Catalogue number
December 2004		
Education and Work, Australia	May 2004	6227.0
Employee Earnings and Hours, Australia, Preliminary	May 2004	6305.0.55.001
Household Income and Income Distribution, Australia	2002-03	6523.0
Industrial Disputes, Australia	September quarter 2004	6321.0.55.001
Labour Force, Australia	November 2004	6202.0
Labour Force, Australia, Detailed - Electronic Delivery	November 2004	6291.0.55.001
Work in Selected Culture and Leisure Activities, Australia	April 2004	6281.0
January 2005		
Australian Labour Market Statistics	January 2005	6105.0
Experimental Estimates of Personal Income for Small Areas, Taxation and Income Support Data	1995-96 to 2000-01	6524.0
Job Search Experience, Australia	July 2004	6222.0
Job Vacancies, Australia	November 2004	6354.0
Labour Force, Australia	December 2004	6202.0
Labour Force, Australia, Detailed - Electronic Delivery	December 2004	6291.0.55.001
Wage and Salary Earners, Public Sector, Australia	September quarter 2004	6248.0.55.001
Year Book Australia	2005	1301.0
February 2005		
2006 Census of Population and Housing: Nature and Content	2006	2008.0
Average Weekly Earnings, Australia	November 2004	6302.0
Labour Force, Australia	January 2005	6202.0
Labour Force, Australia, Detailed - Electronic Delivery	January 2005	6291.0.55.001
Labour Price Index, Australia	December quarter 2004	6345.0
March 2005		
Employee Earnings, Benefits and Trade Union Membership, Australia	August 2004	6310.0
Employee Earnings and Hours, Australia	May 2004	6306.0
Industrial Disputes, Australia	December quarter 2004	6321.0.55.001
Information Paper: Labour Force Survey Standard Errors	2005	6298.0
Informing a Nation: the Evolution of the Australian Bureau of Statistics	2005	1382.0
Job Vacancies, Australia	February 2005	6354.0
Labour Force, Australia	February 2005	6202.0
Labour Force, Australia, Detailed - Electronic Delivery	February 2005	6291.0.55.001
Persons Not in the Labour Force, Australia	September 2004	6220.0
Underemployed Workers, Australia	September 2004	6265.0
Wage and Salary Earners, Public Sector, Australia	December quarter 2004	6248.0.55.001
April 2005		
Australian Labour Market Statistics	April 2005	6105.0
Characteristics of Small Businesses, Australia	2004	8127.0
Labour Force, Australia	March 2005	6202.0
Labour Force, Australia, Detailed - Electronic Delivery	March 2005	6291.0.55.001
Measures of Australia's Progress	April 2005	1370.0.55.001

NOTES

DATA CONTAINED IN THIS ISSUE

The statistics shown are the latest available at 6 January 2005. Data sources for the tables in this publication are listed in Appendix 1.

ELECTRONIC PRODUCTS

The spreadsheets and data cubes referenced in this publication are available on the ABS web site at <<https://www.abs.gov.au>> [AusStats - Publications and Data], then [Data Cubes] or [Time Series Spreadsheets].

INQUIRIES

For information about other Australian Bureau of Statistics (ABS) statistics and services, please refer to the back of this publication.

INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or the Assistant Director, Labour Market, on Canberra (02) 6252 7636.

LABOUR MARKET SUMMARY

KEY MEASURES

Measure		Series type	Period	Current figure	% change from	
					Previous quarter(a)	Previous year(b)
Employed						
Persons	'000	Trend	Nov 2004	9,770.7	0.8	2.5
Full-time	'000	Trend	Nov 2004	6,995.1	0.6	2.5
Part-time	'000	Trend	Nov 2004	2,775.6	1.2	2.3

Part-time employment as a proportion of total employment	%	Trend	Nov 2004	28.4	(c)0.1	(c)-0.1
Unemployed						
Persons	'000	Trend	Nov 2004	548.6	-3.6	-6.5
Looking for full-time work	'000	Trend	Nov 2004	384.5	-5.4	-10.5
Looking for part-time work	'000	Trend	Nov 2004	164.1	1.0	4.5
Unemployment rate						
Persons	%	Trend	Nov 2004	5.3	(c)-0.2	(c)-0.5
Long-term unemployment						
Persons	'000	Trend	Nov 2004	109.9	-7.2	-11.4
As a proportion of total unemployment	%	Trend	Nov 2004	20.0	(c)-0.8	(c)-1.1
Annual labour underutilisation rates(d)						
Long-term unemployment rate	%	Original	Sep 2003	1.3	na	(c)-0.1
Unemployment rate	%	Original	Sep 2003	5.9	na	(c)-0.5
Underemployment rate	%	Original	Sep 2003	5.6	na	(c)-0.2
Labour force underutilisation rate	%	Original	Sep 2003	11.5	na	(c)-0.6
Extended labour force underutilisation rate	%	Original	Sep 2003	12.5	na	(c)-0.7
Children living without an employed parent(e)	%	Original	Jun 2004	17.2	na	(c)0.1
Labour force participation rate						
Persons aged 15-64 years	%	Original	Nov 2004	74.3	(c)0.8	(c)0.3
Total persons	%	Trend	Nov 2004	63.7	(c)0.1	(c)0.3
Actual hours worked						
Aggregate weekly hours	mill. hours	Original	Nov 2004	338.2	1.7	2.3
Average weekly hours - Persons	hours	Original	Nov 2004	34.6	-0.5	-0.4
Average weekly hours - Full-time	hours	Original	Nov 2004	41.7	-0.5	-0.5
Average weekly hours - Part-time	hours	Original	Nov 2004	16.5	-1.4	0.2
Part-time workers						
Proportion who preferred to work more hours	%	Original	Nov 2004	26.0	(c)-0.1	(c)-1.6
Wage price index						
Total hourly rates of pay excluding bonuses	index no.	Trend	Sept qtr 2004	102.1	0.8	3.4
Average weekly earnings						
Full-time adult ordinary time earnings	\$	Trend	Aug 2004	960.00	0.7	3.2
All employees total earnings	\$	Trend	Aug 2004	756.30	0.5	2.8
Compensation of employees						
Household income account	\$m	Trend	Sept qtr 2004	98,314	1.5	6.2
Average earnings (National Accounts basis - nominal) per week	\$	Trend	Sept qtr 2004	883	0.5	2.8
Industrial disputes						
Working days lost	'000	Original	Sept qtr 2004	93.3	-39.5	-43.8
Working days lost per 1,000 employees	number	Original	Sept qtr 2004	11.3	-38.3	-44.5
Job vacancies						
Australia	'000	Trend	Aug 2004	124.7	4.1	20.0

na not available

(a) Same period previous quarter (monthly data is presented for the middle month of each quarter).

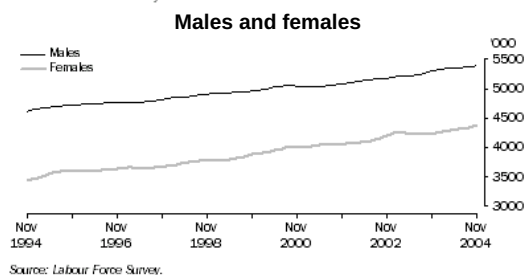
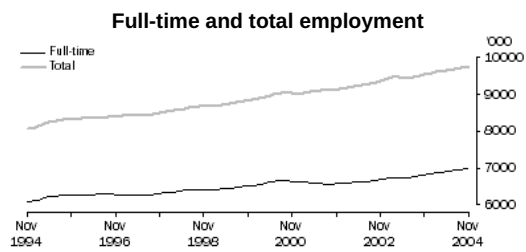
(b) Same period previous year.

(c) Change in in percentage points.

(d) See table 4.1 or the Glossary for further explanation of labour underutilisation rates.

(e) As a proportion of all children aged under 15 years. See the Explanatory Notes for information on family data.

EMPLOYMENT: TREND SERIES

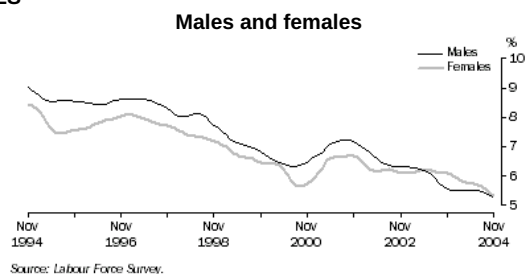


PART-TIME EMPLOYMENT: TREND SERIES

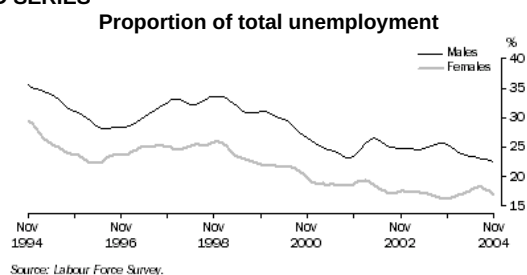




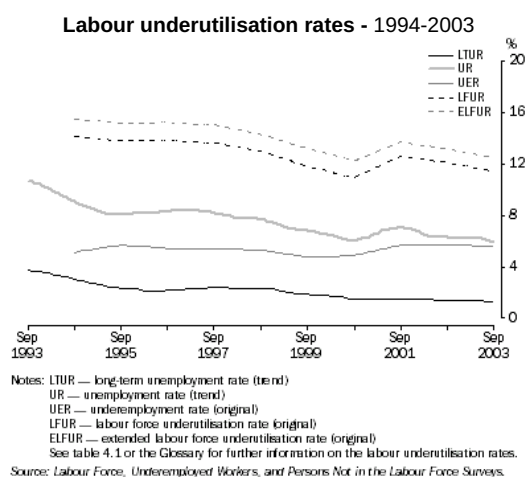
UNEMPLOYMENT RATE: TREND SERIES



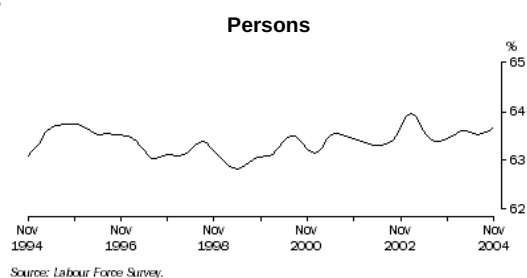
LONG-TERM UNEMPLOYMENT: TREND SERIES

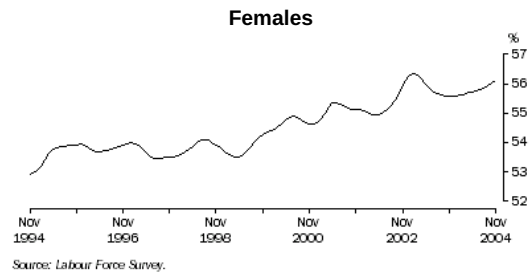
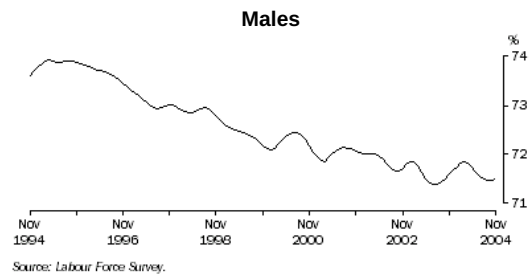


UNDERUTILISED LABOUR



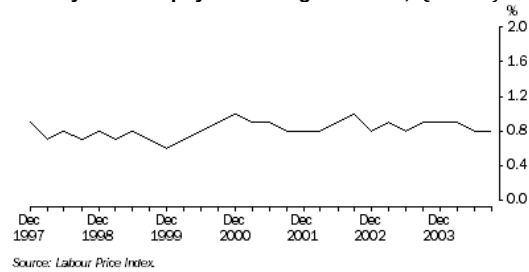
PARTICIPATION RATE: TREND SERIES





WAGE PRICE INDEX: TREND SERIES

Total hourly rates of pay excluding bonuses, Quarterly change

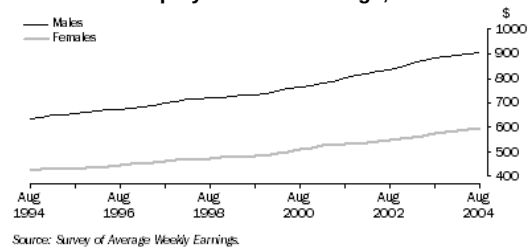


AVERAGE WEEKLY EARNINGS: TREND SERIES

Full-time adult ordinary time earnings, Quarterly change



All employees total earnings, Level



INDUSTRIAL DISPUTES: ORIGINAL SERIES

Working days lost, Quarter ending



JOB VACANCIES: TREND SERIES



About this Release

ABOUT THIS RELEASE

Replaces: Labour Force, Australia 6203.0

This publication is the flagship release for all ABS labour statistics. It draws together data from a range of sources, mostly ABS household and business surveys, to provide an overall picture of the labour market. The key purpose of this publication is to raise awareness of the data available, so that users will be able to use it more effectively.

It contains tables for core data items, presenting the most recent data available at a particular date (rather than relating to a particular reference period). It is also able to be used to announce the release of supplementary surveys and infrequent surveys. Note that, in addition to a brief article in this publication, these would also have separate releases, which would not be delayed by the release in this publication.

The publication is also used to release annual data on Indigenous labour force status, and annual supplementary measures of labour underutilisation. It includes a range of feature articles, both analytical and technical, which will assist users in understanding and interpreting the data and will also promote the range of data available from the ABS labour statistics program. It will be used to announce any changes to labour series or releases.

The publication contains brief explanatory notes, outlining each data source, but referring to the relevant releases, and to Labour Statistics: Concepts, Sources and Methods 6102.0, for more detail.

Labour force participation in Australia (Feature Article)

Feature Article - Labour force participation in Australia

This article was published in the January 2005 issue of **Australian Labour Market Statistics** (cat. no. 6105.0).

INTRODUCTION

Most people in Australia participate in the labour force at some stage in their lives, with paid work the main source of income for many Australians. Participating in paid (or unpaid) work also provides opportunities for social interaction and job satisfaction. Participation in the labour force is therefore of interest from a social perspective.

There is also considerable interest in labour force participation from an economic perspective, particularly with respect to the ageing Australian population and the implications this may have for the size of the labour force. This is an issue for other countries as well, and the January 2004 issue of **Australian Labour Market Statistics** (cat. no. 6105.0) included an article ('**Labour force participation: international comparison**') comparing Australia's labour force participation experience with that of New Zealand, United Kingdom, United States of America and Canada.

A related issue is the age at which people retire (permanently withdraw from the labour force) and this is explored further in the article '**Experimental estimates of the average age at withdrawal from the labour force**' in this issue (January 2005) of **Australian Labour Market Statistics** (cat. no. 6105.0).

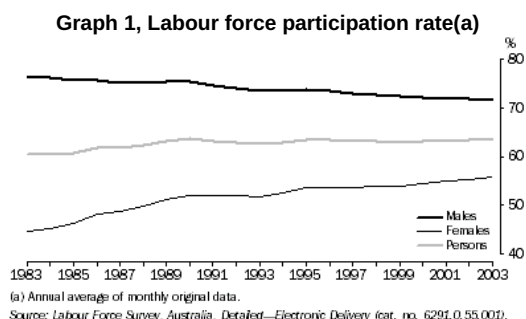
Outline

This article examines the rate of labour force participation in Australia between 1983 and 2003. It looks at the differences between men's and women's participation over time, and considers other factors related to participation such as age and disability. It also assesses the role of part-time employment in the changing levels of participation.

The labour force participation rate is defined as the number of people in the labour force (i.e. either employed or unemployed) for any population group expressed as a percentage of the number of people in that population group.

CHANGES OVER TIME

Australia's labour force participation rate has increased slowly since 1983. In 1983 the participation rate was 60.4%; by 2003 it had risen to 63.6%. The main factor in the long-term rise in the labour force participation rate has been an increase in female participation, from 44.7% in 1983 to 55.9% in 2003. In contrast, male participation fell from 76.7% to 71.6% over the same period. Graph 1 shows male and female participation rates from 1983 to 2003, highlighting the convergence of the two over time. In 1983 the male participation rate was 32.1 percentage points higher than the female rate, however by 2003 the difference had been reduced to 15.7 percentage points.



The economic cycle

The economic cycle has some influence on labour force participation. For example, the Australian participation rate fell 1.2 percentage points between 1990 and 1993, but by 1995 it was almost back to the 1990 level. This period spanned the 1990-91 economic downturn and subsequent recovery.

The participation rate for women varied more during this time than the participation rate for men. The article '**Unemployment and Participation Rates in Australia: A Cohort Analysis**', in the July 2003 issue of **Australian Labour Market Statistics (cat. no. 6105.0)** examines the year effect for participation rates (as well as cohort and age effects), and discusses the influence of the business cycle on the labour market. It concludes that women's decisions to participate in the labour market appear to be more strongly influenced by the economic cycle than men's, possibly reflecting a propensity for women to exit the labour market rather than remaining unemployed when jobs become harder to find.

Changes in the labour market

Between 1983 and 2003, the nature of the labour market changed considerably. The proportion of employment that is part-time (**end note 1**) increased from 17% in 1983 to 29% in 2003. Women are more likely to work part-time than men (in 2003, 46% of employed women worked part-time compared to 15% of men), but the proportion of part-time work has increased for both women and men.

During the same period, there were considerable changes in the composition of employment by industry (**end note 2**). In 1985 (the earliest whole year for which ABS data are available for the current industry classification), 34% of all employed people were employed in goods-producing industries (**end note 3**), but this had dropped to 25% in 2003 (with the remaining 75% of employed people working in service industries) (**end note 4**). While most jobs in goods-producing industries are held by men (78% in both 1985 and 2003), the jobs in service industries are more evenly distributed between women and men (men held 53% of service industry jobs in 1985, decreasing to 48% in 2003).

The increase in part-time work may be related to the changes in the industry composition of the Australian economy, such as the growth of the services sector over the period. In 2003, 34% of people working in service industries were part-time workers, compared to 14% in goods-producing industries.

The changes in the labour market, with the increase in part-time jobs and jobs in service industries (jobs with a high proportion of women), have coincided with the large increase in the proportion of women in the labour force (**end note 5**). The changing industrial structure (described above) appears to be contributing to a rise in the importance attached to skills (**end note 6**), while jobs for low-skill workers are increasingly part-time and casual jobs (**end note 7**).

Table 2 shows participation rates for 1984 (the earliest year for which the educational attainment categories shown in this table are available) and 2003 according to educational attainment. For both men and women, participation was higher for those with non-school qualifications, with people with a degree or higher having higher levels of participation than people with any other level of qualification, in both 1984 and 2003. In 2003, 91.8% of men aged 15-64 years with a degree or higher were participating in the labour force, compared to 75.8% for men without non-school qualifications. The comparable participation rates for women aged 15-64 years were 82.6% with a degree or higher and 59.1% without non-school qualifications.

Table 2, Labour force participation rate, By age and educational attainment - 1984 and 2003

15-24 years		25-44 years		45-54 years		55-64 years		Total (15-64 years)	
1984	2003	1984	2003	1984	2003	1984	2003	1984	2003

Males (%)										
With non-school qualifications	96.4	89.2	97.5	94.8	95.3	94.0	68.5	72.4	93.3	90.7
Degree or higher	87.6	86.7	97.7	94.2	98.4	96.3	77.4	77.1	94.8	91.8
Advanced Diploma/Diploma/Certificate III/IV	97.9	90.0	97.3	95.5	94.6	92.8	66.7	70.8	92.7	90.4
Other qualification	98.9	90.0	100.0	93.5	98.5	93.3	65.0	67.9	96.9	88.8
Without non-school qualifications	74.5	66.0	94.7	87.4	89.5	84.4	60.4	59.9	82.0	75.8
Total	79.1	71.7	96.2	92.0	92.2	90.2	63.6	66.7	86.7	83.6

Females (%)										
With non-school qualifications	84.8	85.2	64.9	78.8	60.4	82.4	35.3	59.2	65.5	78.1
Degree or higher	86.0	88.6	76.0	83.6	78.5	85.7	57.0	63.5	76.6	82.6
Advanced Diploma/Diploma/Certificate III/IV	85.2	83.9	62.1	77.5	58.8	82.6	33.2	60.0	63.6	77.3
Other qualification	74.6	82.9	60.4	70.9	47.6	76.2	23.6	53.2	56.6	71.3
Without non-school qualifications	62.9	62.9	48.9	63.7	44.1	66.7	17.5	34.7	47.0	59.1
Total	67.9	68.9	55.2	72.2	48.3	74.2	20.9	43.7	52.6	67.8

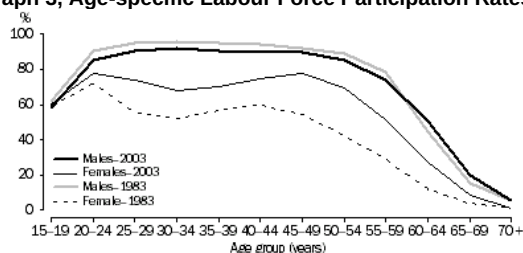
Between 1984 and 2003, the participation rate for women rose 12.6 percentage points for those with non-school qualifications, and 12.1 percentage points for those without any non-school qualifications. Thus, the increase in participation for women was not confined to women with higher skill levels.

In contrast, participation rates for men fell for all levels of educational attainment, but the fall was least for men with higher skill levels. The participation rate for men without non-school qualifications fell by 6.2 percentage points, while the rate for those with non-school qualifications fell by only 2.6 percentage points.

DIFFERENCES BY AGE AND SEX

Labour force participation varies considerably between age groups, reflecting life phases such as studying, child-raising (particularly for women), and retirement. This is illustrated below in Graph 3, which contrasts age-specific participation rates in 1983 with those in 2003.

Graph 3, Age-specific Labour Force Participation Rates(a)



(a) Annual average of monthly original data.
Source: Labour Force Survey, Australia, Detailed—Electronic Delivery (cat. no. 6291.0 55,001).

Women's participation has increased for almost all age groups, while men's participation has fallen slightly in most age groups. These changes are explored later in this article.

YOUTH AND PARTICIPATION IN EDUCATION

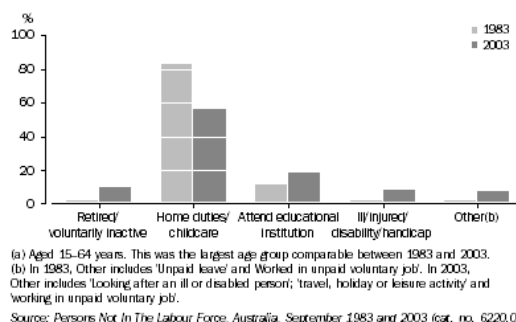
Participation rates for people aged 15-19 years and, to a lesser extent, for people aged 20-24 years are affected by participation in full-time education. While there has been little change in overall labour force participation rates for these age groups over the period 1983 to 2003, there have been changes in the proportion of full-time students, as well as the tendency of these students to participate in the labour force. In 1987 (the first whole year that data on full-time students aged 15-24 years are available from the Labour Force Survey), 32% of people aged 15-24 years were studying full-time and, of these, 35% were participating in the labour force. By 2003, there had been an increase in both the proportion of young people studying full-time (46%), and the proportion of full-time students who were in the labour force (50%).

WOMEN

Caring for children

The most common main activity of women aged 15-64 years who were not in the labour force was 'home duties/childcare', with 83% of women listing this as their main activity in 1983 and 56% in 2003 (as shown in Graph 4). The large decrease in the proportion of women with home duties as their main activity was common across all age groups.

Graph 4, Females not in the labour force(a), Main activity



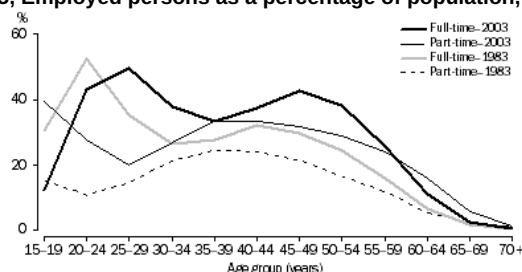
Graph 3 shows that participation rates for women were relatively high in the 20-24 year age group in both 1983 and 2003, and then declined for older age groups, when many women leave the labour force to care for children. However, the nature of this decline has changed. In 1983, the participation rate decreased from 72% for women aged 20-24 years to 55% for women aged 25-29 years. In 2003, the decline between ages 20-24 years and 25-29 years was relatively slight (from 77% to 74%) but there was a greater decline for women aged 30-34 years, who had a participation rate of 68%. This delay in the departure from the labour force reflects the increase in the median age of a mother at the birth of her child, from 26.9 years in 1983 to 30.5 years in 2003 (**end note 8**).

The decline in the female participation rate during child-caring years was smaller in 2003 than 1983, reflecting the fact that women with young children were more likely to be in the labour force in 2003. In 1983, the wife (or female partner) was in the labour force in 32% of couple families where the age of the youngest dependent child was less than 5 years (**end note 9**). By 2003 this proportion had increased to 52% (**end note 10**).

Caring for children impacts not just on the level of women's labour force participation, but also on the type of participation. Graph 5 shows a dip in full-time employment during the years women have children, accompanied by an increase in part-time work, highlighting the fact that many women combine part-time work with family responsibilities.

The increase in the age at which women are having babies is also reflected in Graph 5. While participation in full-time employment for women of child-bearing age was lowest for those aged 30-34 years in 1983, this effect was observed for women aged 35-39 years in 2003. The delay in having children is apparent in the part-time series as well. In 1983, the proportion of women in part-time employment was lowest (at 11%) for women aged 20-24 years, but then increased as more women combined part-time employment with caring for children. In 2003, the proportion of women involved in part-time employment was lowest for women aged 25-29 years (at 20%), increasing in each older age group up to age 40-44 years.

Graph 5, Employed persons as a percentage of population, Females



Post-childcare

Another change in the pattern of participation for women was an increased participation rate for women aged 40-49 years between 1983 and 2003 (see Graph 3), indicating that more women are now returning to the labour force after having children, and that they remain in the labour force for longer periods. In 1983, 60% of women aged 40-44 years were participating in the labour force, decreasing to 54% for women aged 45-49 years. In 2003, 75% of women aged 40-44 years were participating, and this increased to 78% for women aged 45-49 years.

MEN

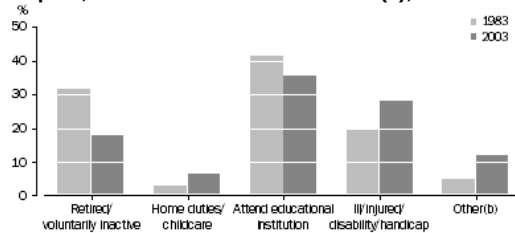
Graph 3 shows that the decline in the male participation rate has occurred across almost all age groups (with the exception being men aged 60 years and older). Participation rates for men in the age groups from 25-29 years to 40-44 years were between 90% and 92% in 2003. While these rates are much higher than those for women, they are lower than those for men in 1983, when participation rates for the same age groups were around 94% to 96%.

This fall in the male participation rate may be linked to factors such as a declining number of jobs in goods-producing industries (which traditionally employ a high proportion of men), changing roles of men in families (with more 'stay at home dads'), and an increasing proportion of men receiving the disability support pension. The latter two factors are further considered in the following paragraphs.

Main activity when not in the labour force

Compared to women, whose most common main activity when not in the labour force was 'home duties/childcare', the main activity of men outside the labour force was more varied. In 1983, the most common main activities of males aged 15-64 years who were not in the labour force were 'attending an educational institution' (42%), 'retired/voluntarily inactive' (31%) and 'ill/injured/disabled/handicapped' (19%). By 2003 the proportion in the latter group had risen to 28%, while the proportions for the 'education' and 'retired' groups had fallen to 36% and 18% respectively. In Graph 6, the 'other' group also shows an increase from 1983 to 2003. In 2003 the two main activities in 'other' were 'travel, holiday or leisure activity' (4% of men not in the labour force stated this as their main activity) and 'looking after ill/disabled person' (3%).

Graph 6, Males not in the labour force(a), Main activity



(a) Aged 15-64 years. This was the largest age group comparable between 1983 and 2003.

(b) In 1983, Other includes 'Unpaid leave' and 'Worked in unpaid voluntary job'. In 2003, Other includes 'looking after an ill or disabled person', 'travel, holiday or leisure activity' and 'working in unpaid voluntary job'.

Sources: Persons Not In The Labour Force, Australia, September 1983 and 2003 (cat. no. 6220.0).

Caring for children

In 1983, 2.7% of males aged 15-64 years who weren't in the labour force said that their main activity was 'childcare/home duties'. By 2003, this had risen to 6.6%. Over the same period, the proportion of couple families where the husband was not in the labour force while the wife **was** in the labour force more than doubled, from 1.6% (**end note 9**) to 4.0% (**end note 10**). These statistics suggest that child-caring responsibilities may be one factor in the declining participation for men, but the proportion of men who did not have paid employment and had a female partner who worked was still relatively low.

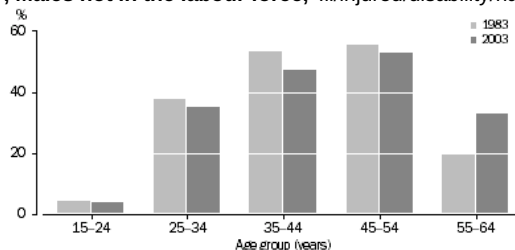
Illness and disability

Illness, injury, handicap or disability may be a factor in the declining male participation rate. In 1983, 19% of men aged 15-64 years who were not in the labour force stated that their main activity was 'ill/injured/disabled/handicapped' (**end note 11**). By 2003 this figure had risen to 28%. Despite the overall increase, the 55-64 year age group was the only age group in which there was an increase in the proportion of men who reported this as their main activity. There was a slight decrease in all the other age groups (see Graph 7).

People with a disability are less likely to participate in the labour force than people without a disability. In 2003, 53% of those people aged 15-64 years who reported that they had a disability were participating in the labour force, compared to 81% of those who reported no disability (**end note 12**). The participation of people who report having a disability is decreasing, particularly for men. In 1993, 63% of men who reported a disability were participating in the labour force, compared to 59% in 2003. On the other hand, the labour force participation of men who reported no disability increased slightly (from 88% to 89%) in this period.

As shown in Graph 7, the proportion of men who were not in the labour force and reported their main activity as being 'ill/injured/disability/handicap' peaked in the 45-54 year age group (55% in 1983 and 53% in 2003) and then declined with age. This probably reflects the fact that later in life more men access an aged pension or superannuation rather than a disability pension and are hence more likely to report their main activity as 'retired/voluntarily inactive'.

Graph 7, Males not in the labour force, 'Ill/injured/disability/handicap'(a)

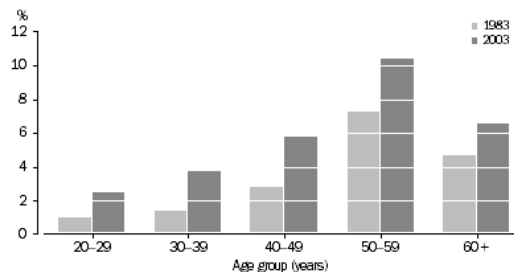


(a) Main activity while not in the labour force.

Sources: Persons Not In The Labour Force, Australia, September 1983 and 2003 (cat. no. 6220.0).

The rising proportion of men reporting 'ill/injured/disability/handicap' as their main activity coincides with the increasing number of men receiving the Disability Support Pension (DSP). In 1983, 3.0% of the male population aged 20 years and over received DSP. This figure had risen to 5.7% by 2003. The increase occurred across all age groups. Graph 8 shows that the proportion of men receiving DSP peaked for men aged 50-59 years in both 1983 and 2003 and then declined for men aged 60 years and over.

Graph 8, Proportion of males receiving DSP



Sources: Department of Family and Community Services.

The increase in men reporting 'ill/injured/disability/handicap' as their main activity when not in the labour force and the increase in men receiving DSP may be caused by a number of factors related to either health or the labour market. Studies by researchers in Australia and other countries suggest that increases in the take up of disability insurance benefits may also be strongly influenced by the eligibility criteria for these benefits (**end notes 13 and 14**).

FURTHER INFORMATION

For further information about statistics on labour force participation in Australia, please contact the Assistant Director, Labour Supply on Canberra (02) 6252 6562.

For email enquiries please contact Client Services on client.services@abs.gov.au.

END NOTES

1. Part-time workers are defined as those who usually work less than 35 hours per week, and either did so during the reference week, or were not at work in the reference week. < Back
2. See the article 'Changes in labour force participation across generations' in the 2003 issue of **Australian Social Trends** (cat. no. 4102.0). < Back
3. In this article, goods-producing industries are defined as Construction; Agriculture, forestry and fishing; Manufacturing; Mining; and Electricity, gas and water. < Back
4. In this article, service industries are defined as Property and business services; Accommodation, cafes and restaurants; Cultural and recreational services; Personal and other services; Health and community services; Retail trade; Education; Wholesale trade; Government administration and defence; Finance and insurance; Transport and storage; and Communication services. < Back
5. See the article 'Changes in labour force participation across generations' in the 2003 issue of **Australian Social Trends** (cat. no. 4102.0), page 138. < Back
6. Wooden, M. (2000), *The Changing Labour Market and its Impact on Work and Employment Relations*, **Melbourne Institute of Applied Economic and Social Research, University of Melbourne**. < Back
7. Wooden, M. (2000), 'The Changing Skill Composition of Labour Demand', **Australian Bulletin of Labour**, Vol, 26 191-198. < Back
8. **Australian Historical Population Statistics** (cat. no. 3105.0.65.001). < Back
9. **Labour Force Status and Other Characteristics of Families** (cat. no. 6224.0). < Back 1 < Back 2
10. **Labour Force Survey, Australia, Detailed - Electronic Delivery** (cat. no. 6291.0.55.001). < Back 1 < Back 2
11. **Persons Not In The Labour Force, Australia** (cat. no. 6220.0). < Back
12. **Disability, Ageing and Carers, 2003** (cat. no. 4430.0). < Back
13. 'Health, disability insurance and labour force participation' (working paper no. 218), **Bank of England Quarterly Bulletin**, Autumn 2004 <<http://www.bankofengland.co.uk/workingpapers/wp218.pdf>>. < Back
14. Cai, Lixin and Gregory, Robert G. (2004), 'Labour Market Conditions, Applications and Grants of Disability Support Pension (DSP) in Australia', **Australian Journal of Labour Economics**, Vol. 7, No.3, September 2004, pp 375-394 (forthcoming). < Back

Experimental estimates of the average age at labour force withdrawal (Feature Article)

Feature Article - Experimental estimates of the average age at labour force withdrawal

This article was published in the January 2005 issue of **Australian Labour Market Statistics** (cat. no. 6105.0).

EXPERIMENTAL ESTIMATES OF THE AVERAGE AGE AT WITHDRAWAL FROM THE LABOUR FORCE

INTRODUCTION

People retire (that is, stop undertaking paid work or stop looking for paid work) for many different reasons. People with access to superannuation, savings, or other sources of income including the aged pension may retire because they no longer want to undertake paid work and can afford to retire. Others may retire involuntarily due to poor health, caring responsibilities, or because they cannot find paid work.

The age at which people retire has become a topic of increased interest in recent years. In 2003, over one third of the Australian population was aged 45 years and over, while it is projected that one half will be in this age group by 2043 (**end note 1**). If the average retirement age stays the same over time, the labour force may become considerably smaller in number. Alternatively, higher labour force participation by older people (and so later retirement) could counter the effects of demographic change on the labour force (**end note 2**).

While trends in retirement age are of considerable interest, the age at retirement is not easily measured. People may leave the labour force and then return either to full-time or part-time work in the future, so apparent retirement may not be permanent. Alternatively, retirement may be gradual, when people who retire from a full-time job continue to work part-time or intermittently. This lack of finality in the work-to-retirement transition creates some difficulties in defining and measuring the age at retirement from the labour force.

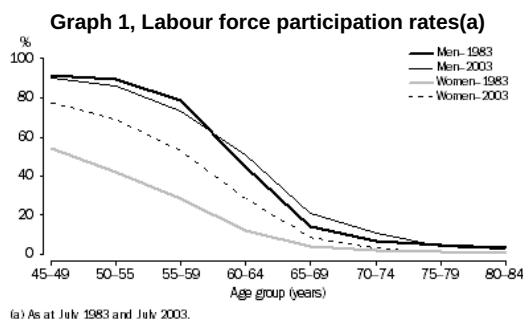
An ABS Research Paper 'Measuring the Age at Withdrawal from the Labour Force' will be released shortly. The Research Paper will outline the conceptual and methodological issues involved in measuring the age at withdrawal from the labour force, and identify the preferred method for calculating the age at withdrawal.

This article presents the experimental estimates of the average age at withdrawal from the labour force using the preferred method identified in the Research Paper. It also presents some general trends in labour force participation of 45-84 year olds over the past two decades. In this article, age at withdrawal is used as a proxy for age at retirement.

LABOUR FORCE AGED 45-84 YEARS

The analysis in this article focuses on the patterns of labour force participation for men and women aged 45-84 years between 1983 and 2003. The 45-84 year age group was chosen for a number of reasons. Withdrawal from the labour force is more likely to be permanent above the age of 45 than at younger ages, and a number of international studies on labour force withdrawal have used a minimum age of 45 (for examples, see: Scherer (**end note 3**); Gendel (**end note 4**); Latulippe (**end note 5**)). A maximum age of 84 years is used in this article because of the very small numbers of people above this age who participate in the labour force.

Graph 1 shows that labour force participation rates for men and women decline noticeably after the mid-fifties. However, while this trend is consistent, there are a number of changes between 1983 and 2003. In this period, participation for men aged between 45 and 59 years has declined, while participation for men aged between 60 and 74 years has risen. Also in this period, participation rates have increased considerably for women aged between 45 and 64 years.



For more information on changes in labour force participation in Australia over the last twenty years, see the article 'Labour Force Participation in Australia' in this (January 2005) issue of **Australian Labour Market Statistics** (cat. no. 6105.0).

DATA AND METHODS

Data from the Labour Force Survey (LFS) can be used to estimate an average age at which people withdraw from the labour force. This is done by examining periodic changes in the number of people participating in the labour force.

Data from the LFS between 1981 and 2003 have been used to calculate the average age at withdrawal from the labour force by measuring changes in the size of the labour force for single year age cohorts between two periods. The net difference is assumed to be the number of people who have withdrawn from the labour force. If more people have entered than left the labour force between two years, the net difference is set to zero, as there has been no net withdrawal from the labour force. Net differences in the size of the labour force are used because it is not possible to track individual people from year to year using the LFS.

The average age at withdrawal from the labour force is calculated by dividing the total combined ages of all people withdrawing by the total number of people withdrawing over the period (with the number of people withdrawing based on the net differences, as explained above). The following equation describes how the measure is calculated.

$$\begin{aligned} &\text{Average age at withdrawal from the labour force} \\ &= \frac{\text{Total age of all people withdrawing}}{\text{Total number of people withdrawing}} \end{aligned}$$

For example, if between two years there is a net withdrawal of 1000 people between ages 59 and 60 and 900 people between ages 64 and 65, then the average age at withdrawal will be $\{(1000 \times 60 + 900 \times 65) / (1000 + 900)\} = 62.4$ years.

Using this method, estimates of the average age at withdrawal are made for both the labour force and the full-time labour force. The full-time labour force is the sum of the number of people in full-time employment and the number of unemployed people who are looking for full-time employment.

The estimates described in the results below are three year averages of the average age at withdrawal. This is done to remove volatility in the estimates. The results refer to the middle year in order to indicate the three year time period, so an estimate of the average age at withdrawal for 2002 actually represents the average age at withdrawal for the period 2001 to 2003.

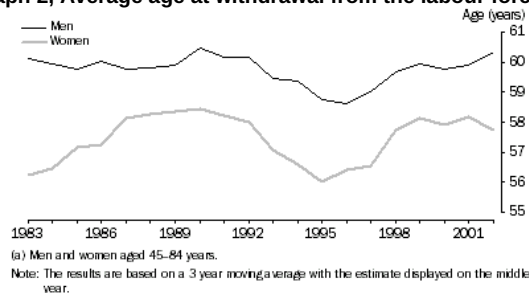
More information on the method for calculating average age at withdrawal is available in the **appendix** at the end of this article. This appendix also contains a table of the estimated age at withdrawal from the labour force, and the full-time labour force, for men and women from 1983 to 2002.

AVERAGE AGE AT WITHDRAWAL FROM THE LABOUR FORCE

Graph 2 shows the average age at withdrawal for men and women over the period 1983 to 2002. In 2002, the average age at withdrawal for men was 60.3 years. Apart from the period between 1993 and 1997, the average age at withdrawal for men has been fairly stable at around 60 years of age. During the mid-1990s, the average age at withdrawal was lower than this, dropping to 58.6 years in 1996.

Since 1987, the average age at withdrawal for women has followed a similar pattern to that of men, although women appear to withdraw at around two years younger than men. Since 1998 the average age at withdrawal for women has been relatively steady at around 58 years of age.

Graph 2, Average age at withdrawal from the labour force(a)

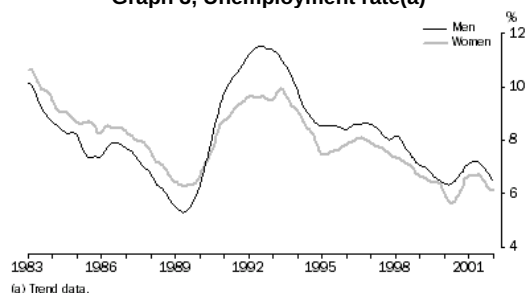


Changes over time in the average age at withdrawal may be influenced by a range of social and economic factors.

Generally, the average age at withdrawal for both men and women appears to follow the economic cycle. During periods of low economic growth, the average age at withdrawal may fall as older people who lose their job and are unable to find a new job may decide to withdraw from the labour force earlier than intended, rather than continue to search for employment. Conversely, during periods of high economic growth, people are less likely to withdraw involuntarily and this may lead to an increase in the average age of withdrawal as people stay in the labour force for longer.

Graph 3 shows unemployment rates for men and women between June 1983 and June 2002. During this period there were two periods of low economic growth in Australia, at around 1983 and 1991, which resulted in periods of high unemployment. The period of low economic growth in the early 1990s, for example, preceded a marked decline in the age at withdrawal of both men and women.

Graph 3, Unemployment rate(a)



A number of other factors may also influence changes in the age at withdrawal. Social changes, such as a greater general acceptance of

women in the workforce, are likely to have contributed to the increase in the participation of women in the labour force in the 1980s, when a marked rise in female labour force participation was accompanied by a rise in the average age at withdrawal for women.

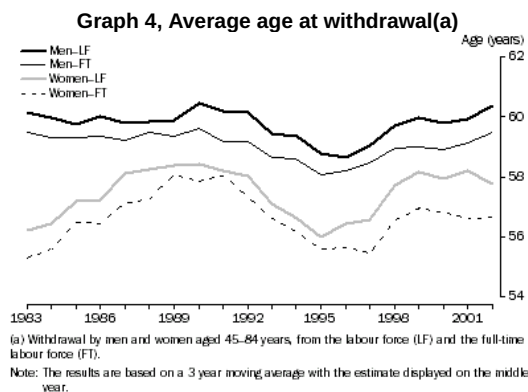
Other factors may include changing expectations of retirement and changes in government policy associated with superannuation and pension benefits.

AVERAGE AGE AT WITHDRAWAL FROM THE FULL-TIME LABOUR FORCE

Graph 4 compares the average age at withdrawal from the labour force with the average age at withdrawal from the full-time labour force. In general, the average age at withdrawal from the full-time labour force follows a similar pattern, though at younger ages, to that of withdrawal from the labour force.

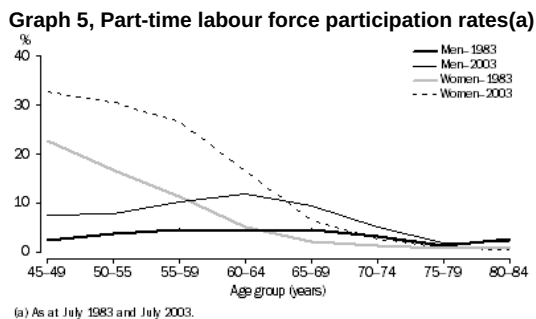
In 1983, the difference between the average age of men withdrawing from the labour force and those withdrawing from the full-time labour force was 0.6 years. It widened to a gap of 1.0 year in 1991, narrowed to a difference of 0.5 years in 1996 and has since then widened again to a difference of 0.9 years in 2002. The gap between withdrawal from the full-time labour force and withdrawal from the labour force shows that some men appear to move from full-time work to part-time work before finally retiring, and this trend has been increasing since the mid-1990s.

The gap between withdrawal from the full-time labour force and the labour force is more variable for women than for men. In 1983, the difference in the average age of women withdrawing from the labour force and those withdrawing from the full-time labour force was 0.9 years, but between 1989 and 1995 the difference narrowed considerably to a low of 0.2 years in 1991. Since 1996, the gap between the age at withdrawal from the full-time labour force and the labour force has increased to more than 1.0 year. In 2001, the difference was 1.6 years.



These results suggest that, overall, the proportion of people retiring from the full-time labour force and working part-time before completely retiring has increased over the past 10 years. Graph 5 shows the part-time participation rates of men and women aged 45-84 years in 1983 and in 2003. The part-time participation rate is the number of people working part-time plus the number of unemployed people looking for part-time work, as a proportion of the population.

In 1983, the part-time participation rate of men was very low, between 1.3% (for men aged 75-79 years) and 4.5% (for men aged 65-69 years). By 2003, the proportion of men participating part-time had at least doubled in every age group between 45-49 years and 65-69 years, with men aged 60-64 years having the highest part-time participation (11.8%). The part-time participation of women aged 45-84 years has also increased considerably in all age groups up to 70-74 years.



SUMMARY

The experimental estimates provided in this article suggest that the average age at withdrawal is influenced by the economic cycle as well as a number of other factors. Men tend to withdraw from the labour force at a slightly older age than women; however, the gap has been narrowing over the past 10 years, which may be related to women's increased participation, particularly in the older age groups. Since the mid 1990s, the difference between the age at withdrawal from the labour force and the age at withdrawal from full-time participation has widened. This indicates that after withdrawing from full-time employment, more people are entering part-time employment before finally withdrawing from the labour force.

FURTHER INFORMATION

The Research Paper **Measuring the Age at Withdrawal from the Labour Force** will be available shortly. Any questions about the estimates can be directed to the Assistant Director, Analytical Services Branch on Canberra (02) 6252 6307.

For email enquiries please contact Client Services on client.services@abs.gov.au.

END NOTES

1. **ABS Population Projections, Australia 2002-2101**, cat. no. 3222.0. < Back
2. Commonwealth Department of Family and Community Services (2003), **Inquiry into long-term strategies to address the ageing of the Australian population over the next 40 years: submission to the 2003 House of Representatives Standing Committee on Ageing**, Occasional paper, number 8. < Back
3. Scherer, P. (2002) "Age of withdrawal from the labour force in OECD countries", **Labour market and social policy occasional paper**, 49, OECD. < Back
4. Gendell, M. (1998) "Trends in retirement age in four countries, 1965-95", **Monthly Labor Review**, vol. 121(8). < Back
5. Latulippe, D. (1996) "Effective retirement age and duration of retirement in the industrial countries between 1950 and 1990", **Issues in Social Protection Discussion Paper 2**, ILO, Geneva. < Back

APPENDIX - DESCRIPTION OF METHODOLOGY USED TO DERIVE AVERAGE AGE AT WITHDRAWAL FROM THE LABOUR FORCE

INTRODUCTION

The estimates of average age at withdrawal from the labour force presented in this article are derived from differences in the estimated number of people in the labour force at each age in each year, based on data from the Labour Force Survey.

This method of calculating the average age at withdrawal is similar to that used by the Organisation for Economic Co-operation and Development (OECD) in their current series of studies of Ageing and Employment Policies. For more information see the OECD web site, which provides information on these studies: <http://www.oecd.org/departement/0,2688,en_2649_34747_1_1_1_1_1,00.html>.

Two other methods were assessed prior to deciding to use the method described here. Both of these alternative methods produced estimates of the expected age at withdrawal, based on the probability of remaining in the labour force for a given period. The alternative methods were more computationally complex and more difficult to interpret. As a result, the current article uses the average age at withdrawal measure. The alternative methods will be explained and compared with this method in a forthcoming Research Paper 'Measuring the Age at Withdrawal from the Labour Force'.

CALCULATION OF THE AGE AT WITHDRAWAL

Method

Data from the LFS have been used to calculate the average age at withdrawal from the labour force by measuring changes in the size of the labour force for single year age cohorts between two years. The net difference is assumed to be the number of people who have withdrawn from the labour force. The average age at withdrawal from the labour force is calculated by dividing the total combined ages of all people withdrawing by the total number of people withdrawing over the period (with the number of people withdrawing being net differences, as explained above). The following equation describes how the measure is calculated.

$$\begin{aligned} &\text{Average age at withdrawal from the labour force} \\ &= \frac{\text{Total age of all people withdrawing}}{\text{Total number of people withdrawing}} \end{aligned}$$

For example, if between two years there is a net withdrawal of 1000 people between ages 59 years and 60 years and 900 people between ages 64 years and 65 years, then the average age of withdrawal will be $\{(1000 \times 60 + 900 \times 65) / (1000 + 900)\} = 62.4$ years. A more detailed example is provided later.

Using this method, estimates of the average age of withdrawal are made for both the labour force and the full-time labour force. The full-time labour force is the sum of the number of people in full-time employment and the number of unemployed people who are looking for full-time employment.

Annual averages

For each year between 1981 and 2003, the estimated number of people in the labour force was derived by averaging the data over the year.

Ages 45 to 84

The age range for the analysis was restricted to ages 45-84 years - in effect, assuming that withdrawal from the labour force starts at 45 years, and all people have withdrawn by 85 years. Although the situation is not this simple in reality, analysis of participation rates showed that these assumptions are reasonable, with very few people 85 years or older remaining in the labour force.

Net entries

If more people have entered than left the labour force between two years, the net difference (a net entry) is set to zero, as there has been no net withdrawal from the labour force.

With the use of 45 years as the lower age bound, there is the potential that, particularly for younger ages in the range, there could be a net entry rather than a net withdrawal. To include these net entries in the calculation, rather than setting them to zero, would increase the estimated average age at withdrawal, distorting the results. Setting net entries to zeros removes the need to consider increasing the lower age bound.

Net entries are also a potential issue for older age groups, where numbers are very small and so subject to considerable sampling error, resulting in volatility of the estimates from year to year.

Three year averages

The estimates described in the results below are three-year averages of the average age of withdrawal. This is done to remove volatility in the estimates. The results in the article refer to the middle year in order to indicate the three year time period, so an estimate of the average age of withdrawal for 2002 actually represents the average age of withdrawal for the period 2001 to 2003.

DETAILED EXAMPLE

In this example, it is assumed that no one withdraws from the labour force before the age of 55 years, and everyone is retired by age 60.

Table 1, Size of labour force

Age (years)	2002	2003
55	1,000	1,000
56	700	600
57	500	450
58	200	175
59	50	40
60	0	0

Step 1

Calculate the amount of withdrawal between 2002 and 2003 at each age

400 = (1000-600) of the people aged 56 years in 2003 withdraw over the year
250 = (700-450) of the people aged 57 years in 2003 withdraw over the year
325 = (500-175) of the people aged 58 years in 2003 withdraw over the year
160 = (200-40) of the people aged 59 years in 2003 withdraw over the year
50 = (50-0) of the people aged 60 years in 2003 withdraw over the year

Step 2

Multiply the number withdrawing by the age at which they withdrew

$$(56 \times 400) + (57 \times 250) + (58 \times 325) + (59 \times 160) + (60 \times 50) = 67940$$

Step 3

Calculate total number of people withdrawing over the year

$$400 + 250 + 325 + 160 + 50 = 1185 \text{ people withdraw}$$

Step 4

The average age of people withdrawing over the year

$$67940 \div 1185 = 57.3$$

RESULTS

Table 2 presents the experimental estimates of the average age at withdrawal from the labour force, and the full-time labour force, using the data and method described above.

Table 2, Average age at withdrawal from the labour force

	From the full-time labour force		From the labour force	
	Women	Men	Women	Men
1983	55.309	59.495	56.229	60.127
1984	55.588	59.297	56.451	59.960
1985	56.472	59.296	57.177	59.760
1986	56.456	59.361	57.256	60.028
1987	57.119	59.220	58.136	59.792
1988	57.245	59.471	58.257	59.826
1989	58.086	59.335	58.359	59.883
1990	57.838	59.587	58.437	60.447
1991	58.050	59.157	58.221	60.176
1992	57.331	59.172	58.037	60.152
1993	56.615	58.632	57.079	59.451
1994	56.175	58.589	56.612	59.357
1995	55.569	58.075	55.994	58.775
1996	55.652	58.175	56.414	58.625
1997	55.438	58.445	56.560	59.041
1998	56.540	58.960	57.735	59.689
1999	56.953	58.988	58.151	59.943
2000	56.801	58.890	57.924	59.772
2001	56.606	59.134	58.184	59.913
2002	56.653	59.500	57.759	60.346

Spotlight: Labour Price Index (Feature Article)

Feature Article - Spotlight: Labour Price Index

This article was published in the January 2005 issue of **Australian Labour Market Statistics** (cat. no. 6105.0).

INTRODUCTION

The first edition of the quarterly publication **Wage Cost Index, Australia** (cat. no. 6345.0) was released in respect of the September quarter 1997. The wage price indexes (**end note 1**) in this publication measure changes over time in wage and salary rates of pay for employee jobs, unaffected by changes in the quality or quantity of work performed. There are four quarterly wage price indexes:

- index of ordinary time hourly rates of pay - excluding bonuses
- index of ordinary time hourly rates of pay - including bonuses
- index of total hourly rates of pay - excluding bonuses
- index of total hourly rates of pay - including bonuses.

The wage price indexes were the first outputs of a program to produce a comprehensive labour price index. Development work to produce price indexes for selected non-wage costs was recently completed, resulting in the release of new non-wage price indexes and a labour price index that combines the wage and non-wage components.

From the September quarter 2004 issue, which was released on 17 November 2004, the **Wage Cost Index, Australia** publication will be issued under the title **Labour Price Index, Australia** (cat. no. 6345.0). The new name identifies the publication as one of the price indexes produced by the ABS, and also reflects the availability of the non-wage price indexes (in addition to the wage price indexes) and the overall labour price indexes.

THE NEW PRICE INDEXES

The non-wage price indexes measure price changes in annual and public holiday leave, employer funded superannuation, payroll tax, and workers' compensation. Like the wage price indexes, the non-wage price indexes are Laspeyres-type price indexes, which measure changes in the price of labour using fixed weights. The price changes recorded are unaffected by changes in the quality and quantity of the work performed.

These non-wage price indexes are compiled on a financial year basis, and are available for the years starting from 2001-02.

The annual and public holiday leave index and the superannuation index are calculated using data collected from a sample of individual jobs common to consecutive time periods.

- The **annual and public holiday leave price** is derived using both wage data (in the form of an hourly rate of pay) and the amount of annual and public holiday leave that is offered by the employer. The index is constructed by comparing this price to that in the previous time period. Changes in the price will result from changes in the hourly rate of pay, and/or the amount of leave offered by the employer.
- The **superannuation price** is derived using both wage data (again in the form of an hourly rate of pay) and the rate of superannuation that is paid by the employer. Changes in the price from one period to the next will result from changes in the hourly rate of pay, and/or the rate of superannuation paid by the employer.

The methodology used to calculate the payroll tax index and the workers' compensation index differs from that used for annual and public holiday leave and superannuation. As payroll tax and workers' compensation are both levied at the employer level, the price is also

determined at this level. Therefore, rather than calculating the indexes from a sample of individual jobs, the payroll tax and workers' compensation indexes are calculated using an employer's total payroll.

- Utilising data from both ABS and non-ABS sources, the **payroll tax price** is modelled by applying the appropriate payroll tax variables (rate and threshold) to employer payroll data. Changes in the price from one period to the next will result from changes in the payroll tax variables, and/or the employer's payroll (excluding payroll changes resulting from changes in the number of employees).
- The **workers' compensation price** is modelled by applying the appropriate workers' compensation premium rate to employer payroll data. Where applicable, the prices of any excess and excess buy-out options are also modelled. Changes in the price from one period to the next will result from changes in the range of workers' compensation variables, and/or the employer's payroll (again, excluding payroll changes resulting from changes in the number of employees).

LABOUR PRICE INDEX

A labour price index can be constructed from the individual wage and non-wage components. Two versions of the labour price index are produced, one excluding bonuses and the other including them. As is the case for the wage price indexes, with bonus payments often reflecting changes in the quality of work performed, only the labour price index that excludes bonuses is considered to be a pure price index.

Like the non-wage price indexes, the labour price indexes are compiled on a financial year basis, and are available for the years starting from 2001-02.

KEY RESULTS

Table 1 shows the percentage change from the previous financial year for some of the key indexes from the Labour Price Index.

Table 1, Labour Price Index

Index	Change from previous financial year (%)	
	2002-03	2003-04
Total hourly rates of pay excl. bonuses	3.4	3.6
Annual and public holiday leave	3.5	2.6
Superannuation	11.8	3.7
Payroll tax	2.7	3.3
Workers' compensation	5.4	3.3
Labour price index excluding bonuses	4.1	3.5

The total hourly rates of pay excluding bonuses index and labour price index excluding bonuses show similar rates of change from the previous financial year for 2003-04. This was not the case for 2002-03 when the labour price index showed a larger rate of increase than the total hourly rates of pay excluding bonuses index. The main reason for the difference in 2002-03 was the impact of the changed Superannuation Guarantee Levy upon the labour price index (see notes on the superannuation index below).

Annual and public holiday leave

The percentage change from the previous financial year for all sectors, Australia for 2003-04 was 2.6%. All states contributed to this increase except for Victoria with -0.5% and Tasmania with 0.0%. In 2002-03 ANZAC Day fell on Friday, whereas in 2003-04 it fell on a Sunday. Unlike other states and territories, Victoria and Tasmania did not provide an additional day off in lieu in 2003-04. As a result, the price of public holidays in these two states decreased in 2003-04.

Superannuation

The percentage change from the previous financial year was 11.8% for 2002-03 and 3.7% for 2003-04. The reason for the high rate of change for 2002-03 was the increase in the Superannuation Guarantee Levy, which rose from 8% to 9% in July 2002.

DATA AVAILABILITY

The new indexes will be published annually in November, as part of the September quarter Labour Price Index publication. Eleven additional tables will be included, presenting non-wage and labour price indexes. These tables provide state/territory, sector and industry information. In November 2004, data for three financial years were released: 2001-02, 2002-03 and 2003-04.

RE-REFERENCE OF THE WAGE PRICE INDEXES

The reference base of an index series is that period for which the value of the index is set to 100.0. For the wage price indexes, the September quarter 1997 was used as the original reference base, as it was the first quarter for which data were available. With the introduction of the non-wage price indexes, all index numbers are presented on a reference base of 2003-04.

A consequence of re-referencing price indexes can be that the period to period percentage changes calculated using re-referenced index numbers may differ slightly from those calculated using the original series. These differences do not constitute a revision of the index but simply reflect the effect of rounding.

FURTHER INFORMATION

The **Labour Price Index, Concepts, Sources and Methods** (cat. no. 6351.0.55.001) provides comprehensive information about the concepts underlying the LPI, as well as the data sources and methods used to compile it. The September 2004 edition of the **Labour Price Index, Australia** (cat. no. 6345.0) contains information about the wage and non-wage price indexes as well as an appendix about the re-referencing of the wage price series.

For further information, please contact the Assistant Director on Perth (08) 9360 5151.

For email enquiries, please contact Client Services on client.services@abs.gov.au.

END NOTES

1. The term 'wage cost index' which has been used up until now, has been replaced by 'wage price index', consistent with the other changes being made to the publication.< Back

Technical report: Implementation of computer assisted interviewing in the Labour Force Survey (Feature Article)

Feature Article - Technical report: Implementation of computer assisted interviewing in the Labour Force Survey

This article was published in the January 2005 issue of **Australian Labour Market Statistics** (cat. no. 6105.0).

SUMMARY

The ABS progressively implemented computer assisted interviewing (CAI) into the Labour Force Survey (LFS) over the period October 2003 to August 2004. This method of interviewing replaced the traditional 'pen and paper' method used previously. Under CAI, interviewers record responses directly onto an electronic questionnaire in a notebook computer. Users of LFS data were informed of progress with the implementation of CAI in issues of the monthly publication **Labour Force, Australia** (cat. no. 6202.0) over the period August 2003 to August 2004.

The ABS expected that the implementation of the CAI interviewing method would not have a significant impact on published labour force estimates. During the implementation period the ABS conducted a range of analyses on each month's data. These analyses confirmed that the change in interviewing method did not materially affect the aggregate estimates for any month during the implementation period.

BACKGROUND

The LFS obtains information from a sample of private dwellings (currently about 30,000 houses, flats, etc.) and a sample of non-private dwellings (hotels, hospitals, nursing homes, etc.). About 0.45% of the population of Australia are surveyed each month. Selected dwellings remain in the survey for eight consecutive months, with one-eighth of the sample replaced each month. Information is obtained from the occupants of selected dwellings by trained interviewers, using face-to-face and telephone interviewing.

PREPARING FOR CAI

During 2002 and 2003 the ABS developed and tested a CAI version of the paper questionnaire and associated processing systems and procedures. The CAI version was designed to replicate the paper questionnaire and procedures as closely as possible. This was done to minimise the chances of any impact on labour force series from the change to CAI.

During these two years the ABS also trained interviewers and office staff in the use of CAI. A number of other ABS household surveys have been enumerated using CAI over the past five years.

A phase-in strategy was developed to meet a number of statistical and operational objectives. These included minimising the effect on published estimates should data collected in the initial phase-in of CAI not be available for use in compiling survey estimates, and ensuring that a reasonable measure could be made of any potential statistical impact of implementing CAI.

IMPLEMENTING CAI IN THE LFS

The CAI method was implemented in four phases, starting with 10% of survey interviews in October 2003, increasing to 40% between February and April 2004, to 70% in June and 100% in August 2004. The phases were:

Phase 1: For the October 2003 survey, a random sample of 10% of interviewers in all states and territories were selected to use the CAI method. The selected interviewers conducted all their interviews using CAI. This means approximately 10% of LFS interviews were conducted using CAI in October 2003. The remaining 90% of interviewers used the 'pen and paper' method. The interviewers selected for CAI in October 2003 continued to enumerate all of their interviews with CAI in subsequent months. As a result, the proportion of interviews allocated to Phase 1 remained constant at about 10% for all months after October 2003.

Phase 2: For the February 2004 survey, an additional random sample of 30% of LFS interviewers in New South Wales, Victoria, South Australia and the Australian Capital Territory were selected to use CAI. ABS had planned to increase the sub-sample of interviewers using CAI to 30% in all states and territories in February, but a number of technical problems prevented this. For the April 2004 survey, an additional random sample of 30% of LFS interviewers in Tasmania, Queensland, Northern Territory and Western Australia were selected to use CAI for the first time. Interviewers in the Phase 2 sample continued to use CAI in subsequent months.

Phase 3: For the June 2004 survey, an additional random sample of 30% of interviewers in all states and territories was selected to use CAI for the first time.

Phase 4: The remaining 30% of interviewers conducted their interviews using CAI for the first time in August 2004. That is, all persons in the LFS in August 2004 were interviewed using CAI.

The interviewers allocated to each phase were selected to have a representative distribution of: capital city and balance of state; private and non-private dwellings; and the survey's eight rotation groups.

MEASURING THE IMPACT

The impact on LFS estimates of changing the interview technique is called a mode effect. The CAI mode effect associated with any LFS estimate (e.g. number of unemployed persons in Australia) is the difference between the estimate that would result if all data were collected by CAI, and the estimate that would result if all data were collected by the 'pen and paper' method.

The approach used to phase in CAI provided a relatively powerful means for the identification and measurement of a possible mode effect. The mode effect was estimated by a method that drew strength from comparing that part of the sample which had been converted to CAI with the remainder of the sample, as well as comparing the data before and after CAI was introduced. In particular, the comparison took account of any variation in the age and sex structure of the sample, and in the historical levels of the data prior to the introduction of CAI.

A range of analyses was conducted using data from August 2003 to August 2004 to estimate the CAI mode effect for each of the phase-in groups, as well as for the whole sample. The analyses were intended to test if the CAI mode effect was larger than 0.3 percentage points in the unemployment rate and 0.4 percentage points in the employment to population ratio, at the Australia level. (The statistical tests performed had a chance of identifying these sizes of impact with 80% probability, and a 10% chance of false identification.) These thresholds correspond to approximately 3 times the standard errors of the month to month movement of the corresponding estimates.

Results from these analyses showed that the estimated mode effects were very small when assessed against the sampling variability expected for these estimates. That is, there was no statistical evidence of a mode effect on the published key labour force estimates (employed persons, unemployed persons and the unemployment rate).

As reported by the ABS in the September 2004 issue of **Labour Force, Australia** (cat. no. 6202.0), operational difficulties were experienced during enumeration of the August 2004 LFS, resulting in a lower than usual response rate. Software problems with the CAI notebook computers contributed to the drop in response rate in August 2004 (the software problems have since been fixed). Analysis conducted by the ABS subsequent to the publication of August 2004 LFS results indicated that the reduced response rate caused a small understatement of the August employment estimate. Notwithstanding this impact, there was no evidence of a sustained CAI mode effect during the period August 2003 to August 2004.

FURTHER INFORMATION

For further information about the Labour Force Survey please contact the Assistant Director, Labour Force on Canberra (02) 6252 6565.

For email enquiries please contact Client Services on client.services@abs.gov.au.

Employment in information and communication technology (ICT) (Feature Article)

Feature Article - Employment in information and communication technology (ICT)

This article was published as a spotlight in the January 2005 issue of **Australian Labour Market Statistics** (cat. no. 6105.0).

EMPLOYMENT IN INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

INTRODUCTION

ICT workers as a proportion of all employed persons has remained virtually unchanged over the last five years. The importance of ICT in enhancing long-term economic growth, increasing productivity and furthering technological development was acknowledged in the ABS discussion paper **Measuring a Knowledge-based Economy and Society, An Australian Framework, 2002** (cat. no. 1375.0).

This article uses data from the Labour Force Survey (LFS) to analyse various characteristics of persons employed in ICT occupations (also referred to as ICT workers) in Australia over the past five years.

This article is an update from a previously released article that appeared in the January 2004 edition of **Australian Labour Market Statistics** (cat. no. 6105.0). This article includes more recent data, and takes into account revised population benchmarks introduced into the LFS for February 2004 (see Explanatory Notes, paragraphs 28-29).

CLASSIFICATION OF ICT OCCUPATIONS

ABS collections use the **Australian Standard Classification of Occupations (ASCO) Second Edition** (cat. no. 1220.0) to classify occupations according to skill level and skill specialisation. LFS data on occupations are collected for employed persons each February, May, August and November, and coded to the Unit Group (i.e. 4 digit) level of ASCO. Employed people with more than one job are coded to the occupation of their main job. For the purposes of this article, Unit Groups relating to ICT occupations have been grouped into two broader occupational groups: Computing professionals and technicians; and Electronic engineers/technicians and communication technicians, as shown in Table 1.

Table 1, ICT occupations

Grouping	Occupation description
Computing professionals and technicians ASCO Unit group	
1224	Information technology managers
2231	Computing professionals
3294	Computing support technicians
Electronic engineers/technicians and communication technicians ASCO Unit group	
2125	Electrical and electronic engineers
3124	Electronic engineering associate professionals
4315	Electronic and office equipment tradespersons
4316	Communication tradespersons
9918	Electrical and telecommunication trades assistants

EMPLOYMENT IN ICT OCCUPATIONS

The total number of ICT workers increased for each of the three years to 2002-03 peaking at 339,700 persons, but declined to 335,200 persons in 2003-04. The proportion of total employed persons that are ICT workers has remained relatively stable over the last five years (4% in 2003-04).

The following table shows the number of persons employed in ICT occupations, and the number of all employed persons from 1999-2000 to 2003-04. Data shown are financial year averages.

Table 2, Employed persons, ICT occupation groups - 1999-2000 to 2003-04(a)

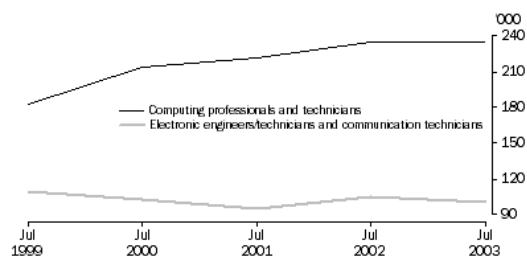
	1999-2000 '000	2000-01 '000	2001-02 '000	2002-03 '000	2003-04 '000
Computing professionals and technicians					
Information technology managers	14.5	24.3	29.5	30.2	29.7
Computing professionals	140.6	161.1	163.2	174.8	174.6
Computing support technicians	27.3	28.4	29.4	29.7	30.7
Total	182.5	213.8	222.1	234.7	235.0
Electronic engineers/technicians and communication technicians					
Electrical and electronics engineers	25.2	25.1	23.7	26.4	23.7
Electronic engineering associate professionals	16.9	14.3	15.5	14.5	15.1
Electronic and office equipment tradespersons	35.8	34.4	32.6	36.7	33.9
Communications tradespersons	29.3	26.1	20.7	24.5	24.7
Electrical and telecommunications trades assistants	2.5	3.0	2.8	2.9	2.8
Total	109.6	102.9	95.3	105.0	100.2
Total ICT workers	292.1	316.8	317.4	339.7	335.2
Total employed	8,835.2	9,016.5	9,143.8	9,377.5	9,528.0
Proportion of total employed that are ICT workers (%)	3.3	3.5	3.5	3.6	3.5

(a) Financial year average.
Labour Force Survey, Australia, Detailed - Electronic Delivery, (cat. no. 6291.0.55.001).

Computing professionals continued to dominate the range of ICT professions in 2003-04, accounting for 52% of all ICT workers. Computing professionals covers system managers, designers, programmers and auditors, software designers, and applications and analyst programmers.

ICT employment growth remained strongest in the Computing professionals and technicians group, where the number of employed persons increased by 29% from 182,500 in 1999-2000 to 235,000 in 2003-04. However, there was no growth in the latest year. For the Electronic engineers/technicians and communication technicians group, the number of employed persons has fluctuated over the last five years. The number of persons employed in this occupation group decreased by 9% from a peak of 109,600 in 1999-2000 to 100,200 in 2003-04, despite an increase during the 2002-03 period.

Graph 3, Employed persons, ICT occupations - 1999-2000 to 2003-04(a)



(a) Financial year average.
Source: Labour Force Survey, Australia, Detailed—Electronic Delivery, feat. no. 6291.0.55.001.

UNEMPLOYMENT IN ICT

The LFS provides data on the last occupation of unemployed persons who had worked for two weeks or more within the previous two years. Of the 585,600 people unemployed for 2003-04 (average for the financial year), occupation was only able to be coded for 58% or 339,650 persons. In 2003-04, there were 12,100 people, on average, who were unemployed but had last worked (for two weeks or more in the previous two years) in an ICT occupation. They represented 4% of all unemployed persons who had occupation coded, which is similar to the proportion of employed persons working in ICT occupations.

HOURS WORKED

In 2003-04, the proportion of ICT workers employed full-time was higher than the proportion of all employed persons working full-time (93% compared with 71%).

Average hours usually worked each week by all ICT workers continued to be higher than all employed persons (41.4 hours compared with 36.9 hours) during 2003-04. This is largely due to the high proportion of ICT workers working in full-time positions. Average weekly hours usually worked by full-time ICT workers were slightly lower than those worked by all full-time workers (43.0 hours compared with 44.5 hours). For those ICT workers employed part-time, the average weekly hours usually worked were slightly higher than those of all persons employed part-time (20.4 hours compared with 18.0 hours).

Table 4, Employed persons, ICT workers and total employed - 2003-04(a)

		ICT workers			Total employed
		Computing(b)	Electronic and communication(c)	Total	
Employed					
	Full-time (%)	92.5		93.3	71.4
	Part-time (%)	7.5		6.7	28.6
	Total (%)	100.0		100.0	100.0
Average weekly hours usually worked in all jobs					
	Employed full-time (hours)	43.2	42.7	43.0	44.5
	Employed part-time (hours)	21.5	17.5	20.4	18.0
	Total (hours)	41.5	41.0	41.4	36.9

(a) Financial year average.

(b) Includes computing professionals and technicians.

(c) Includes electronic engineers/technicians and communication technicians.

Labour Force Survey, Australia, Detailed - Electronic Delivery, (cat. no. 6291.0.55.001).

LOCATION

The highest concentration of ICT workers occurred in the ACT where they represented 8% of all employed persons. In contrast, the lowest concentration of ICT workers was in Tasmania, accounting for 2% of all employed persons in this state. There is a high concentration of ICT workers in capital cities. In 2003-04, 79% of all persons employed in ICT occupations were based in a capital city, compared with 63% of all employed persons.

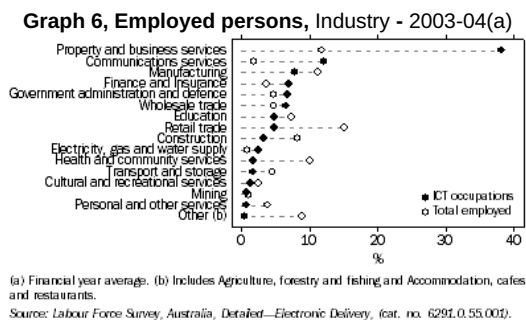
Table 5, Employed persons, State/territory and capital city/balance of state - 2003-04(a)

	ICT workers			Total employed %	Proportion of total employed that are ICT workers %
	Computing(b) %	Electronic and communication(c) %	Total %		
State/territory					
New South Wales	41.5	35.3	39.7	33.1	4.2
Victoria	28.7	24.2	27.4	24.8	3.9
Queensland	10.8	19.4	13.4	19.3	2.4
South Australia	5.2	5.5	5.3	7.5	2.5
Western Australia	6.7	10.4	7.8	10.2	2.7
Tasmania	1.0	1.9	1.3	2.2	2.1
Northern Territory	0.6	1.1	0.7	1.0	2.6
Australian Capital Territory	5.4	2.0	4.4	1.8	8.4
Capital city/balance of state					
Capital cities	82.2	71.3	78.9	63.2	4.4
Balance of states/territories	17.8	28.7	21.1	36.8	2.0
Australia	100.0	100.0	100.0	100.0	3.5

(a) Financial year average.
 (b) Includes computing professionals and technicians.
 (c) Includes electronic engineers/technicians and communication technicians.
 Labour Force Survey, Australia, Detailed - Electronic Delivery, (cat. no. 6291.0.55.001).
 The proportions in this table have been created using unrounded estimates, and therefore may not add to 100%.

INDUSTRY

Over the last five years, the Property and business services industry (which includes a Computer services subdivision) has been the main employer of ICT workers. In 2003-04, 38% of all ICT workers were employed in the Property and business services industry. Most ICT workers in this industry (86%) were in Computing professionals and technicians occupations. The second highest number of ICT workers were in the Communications services industry (12% or 40,600 persons), with 62% employed in Electronic engineers/technicians and communication technicians occupations.



AGE

In 2003-04, almost one-third (32%) of ICT workers were in the 25-34 year age group. This was followed closely by the 35-44 year age group (31% of all ICT workers).

Table 7, Employed persons, Age - 2003-04(a)

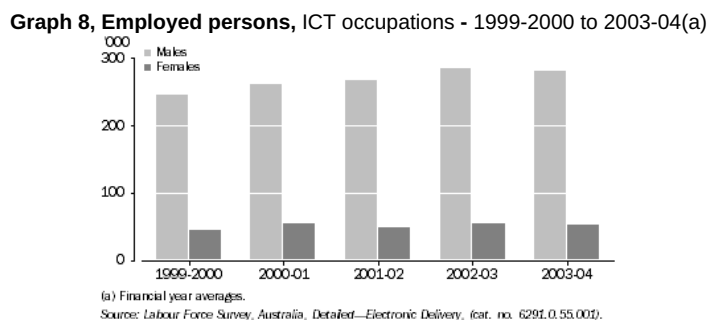
Age group (years)	ICT workers	Total employed
	%	%
15-24	10.5	18.0
25-34	32.5	23.0
35-44	31.2	24.1
45-54	20.5	22.2
55-64	5.1	11.1
65 and over	0.4	1.7
Total	100.0	100.0

(a) Financial year average.
 Labour Force Survey, Australia, Detailed - Electronic Delivery, (cat. no. 6291.0.55.001).

SEX

Of the 335,200 ICT workers in 2003-04, 84% were males (282,600 persons). The proportion of ICT workers that are female has remained relatively steady at around 16% (52,600 persons) over the past six years.

In 2003-04, male ICT workers represented 5% (282,600) of the total male employed population (5,289,500). In comparison, female ICT workers represented 1% (52,600) of the total female employed population (4,238,400).



COUNTRY OF BIRTH

In 2003-04, 37% of all ICT workers were overseas-born, compared to 25% of all employed persons. This is similar to the situation in

1999-2000 when 36% of all ICT workers were overseas-born compared to 25% of all employed persons.

Table 9, Employed persons, Country of birth - 1999-2000 and 2003-04(a)

	1999-2000			2003-04		
	Born in Australia '000	Born overseas '000	Proportion of total employed born overseas %	Born in Australia '000	Born overseas '000	Proportion of total employed born overseas %
ICT workers	186.5	105.6	36.2	212.8	122.4	36.5
Total	6,652.2	2,183.0	24.7	7,177.6	2,350.4	24.7
Proportion of total employed that are ICT workers (%)	2.8	4.8	..	2.9	5.2	..

.. not applicable

(a) Financial year average.

Labour Force Survey, Australia, Detailed - Electronic Delivery, (cat. no. 6291.0.55.001).

FURTHER INFORMATION

For further information about statistics on information and communication technology workers, please contact Assistant Director, Innovation and Technology Statistics on Canberra (02) 6252 6181.

For email enquiries please contact Client Services on client.services@abs.gov.au

Explanatory Notes

Explanatory Notes

INTRODUCTION

1 Australian Labour Market Statistics brings together a range of ABS labour statistics to present a statistical summary of the Australian labour market. It has been developed primarily as a reference document, and provides a broad basis for labour analysis and research.

2 In addition to data from the Labour Force Survey (LFS), this publication contains statistics from a range of other ABS labour surveys including Average Weekly Earnings, the Labour Price Index, Job Vacancies, Employment and Earnings - Public Sector, and Industrial Disputes. The publication also includes summary data from recently released labour force supplementary surveys.

3 This publication includes international data for selected labour market indicators.

LABOUR STATISTICS CONCEPTS, SOURCES AND METHODS

4 The concepts and definitions underpinning ABS labour statistics align closely with the standards and guidelines set out in Resolutions of the International Conference of Labour Statisticians. Descriptions of the underlying concepts of Australia's labour market statistics, and the sources and methods used in compiling the estimates, are presented in **Labour Statistics: Concepts, Sources and Methods** (cat. no. 6102.0.55.001), which is available on the ABS web site at <https://www.abs.gov.au> [Themes - People - Labour - **Labour Statistics: Concepts, Sources and Methods**].

5 For an explanation of terms used in this publication, refer to the Glossary.

LABOUR STATISTICS THEME PAGE

6 The Labour Statistics theme page is a portal to all labour statistics and related information residing on the ABS web site. The page contains hyperlinks to **Labour Statistics: Concepts, Sources and Methods** (cat. no. 6102.0.55.001); information about labour related surveys; and a help page for respondents to ABS labour related surveys. The Labour Theme Page can be accessed at <https://www.abs.gov.au> [Themes - People - Labour].

TREND ESTIMATES

7 Series in this publication include **original** and **trend** series. Special care should be taken in interpreting data for the most recent months and quarters, as some of the original and all of the trend series are subject to revision.

8 It is not uncommon for movements in original time series data and those provided from trend series to differ. Movements in a time series of original data may reflect several factors, including:

- longer-term changes in the item being measured (i.e. trend movements)
- short-term irregular changes
- regular seasonal influences
- normal 'trading', 'working' or 'pay' day patterns

- systematic holiday effects.

9 Trend estimates help the user to identify the underlying magnitude and direction of a time series. Seasonal adjustment removes the effect of the last three listed influences from the data, leaving only trend and short-term irregular movements. Trend estimates are then obtained by removing the effects of the short-term irregularities, which in some series can be a major contributor to movements in the original data.

10 Trend estimates are produced by smoothing the seasonally adjusted series using a statistical procedure based on Henderson moving averages. At each time point in a series, a trend estimate is calculated using a centred x-term Henderson moving average of the seasonally adjusted series. The moving averages are centred on the point in time at which the trend is being estimated. The number of terms used to calculate the trend varies across surveys. Generally, ABS monthly surveys use a 13-term moving average and quarterly surveys use a 7-term moving average.

11 Estimates for the most recent time points cannot be calculated using the centred average method as there are insufficient data to do so. Instead, alternative approaches that approximate the smoothing properties of the Henderson moving average are used. This can lead to revision in the trend estimates for the most recent time periods until sufficient data are available to calculate the trend using the centred Henderson moving average. Revisions of trend estimates will also occur with revisions to the original data and re-estimation of seasonal adjustment factors.

12 Seasonal factors are reviewed at least annually for ABS labour series, to take account of additional original data. The results of the latest reviews were used to compile the trend estimates given in this publication. For further information about the most recent reviews of seasonal factors for the labour surveys, see the following publications:

- for labour force see **Labour Force, Australia** (cat. no. 6202.0)
- for labour price index see **Labour Price Index, Australia** (cat. no. 6345.0)
- for average weekly earnings see **Average Weekly Earnings, Australia** (cat. no. 6302.0)
- for public sector employees see **Wage and Salary Earners, Public Sector, Australia** (cat. no. 6248.0.55.001)
- for job vacancies see **Job Vacancies, Australia** (cat. no. 6354.0).

13 The general methods used in the ABS for estimating trends are described in **Information Paper: A Guide to Interpreting Time Series - Monitoring Trends** (cat. no. 1349.0).

RELIABILITY OF ESTIMATES

14 Estimates in this publication are subject to two types of error:

- sampling error - errors that occur because the data were obtained from a sample rather than the entire population
- non-sampling error - errors that occur at any stage of a survey and can also occur in a census, e.g. incorrect responses to questions, processing errors, frame deficiencies.

15 For more information on these sources of error, and on measures of these types of errors, including standard errors, refer to the main publications associated with each of the data series presented in this publication (see the relevant sections later in these Explanatory Notes). More information on standard errors applying to LFS estimates is contained in **Information Paper: Labour Force Survey Standard Errors** (cat. no. 6298.0).

ROUNDING

16 Estimates have been rounded and discrepancies may occur between sums of the component items and totals.

LABOUR FORCE SURVEY DATA

Description of the survey

17 Data in tables 1.1-1.7, 2.1-2.10, 3.1-3.3, 4.3 and 4.4 are obtained from the Labour Force Survey (LFS), which provides extensive information about the labour market on a monthly basis. The LFS is a component of the Monthly Population Survey (MPS), which includes the LFS and supplementary surveys.

Monthly Population Survey

18 The MPS is a population survey based on a multi-stage area sample of private dwellings (currently about 30,000 houses, flats, etc.), and list samples of discrete Indigenous communities and non-private dwellings (hospitals, hotels, motels, etc.), and covers about 0.5% of the population of Australia. The information is obtained from occupants of selected dwellings by interviewers, with the first interview conducted face-to-face and subsequent interviews over the telephone. Once selected, households are included for eight consecutive months before being replaced.

Labour Force Survey

19 The LFS has been conducted on a monthly basis since February 1978. Prior to that, from 1964 to 1978, a national survey was conducted quarterly. Telephone interviewing was introduced between August 1996 and February 1997. New questionnaires have been introduced periodically, most recently in April 2001.

20 The LFS includes all usual residents of Australia aged 15 and over except:

- members of the permanent defence forces
- certain diplomatic personnel of overseas governments, customarily excluded from census and estimated population counts
- overseas residents in Australia
- members of non-Australian defence forces (and their dependants) stationed in Australia.

21 From July 1993, Jervis Bay Territory has been excluded from the scope of the LFS.

Supplementary surveys

22 The supplementary surveys collect additional data on a different topic each month. Many topics covered are rotated on an annual or less frequent basis, while others are included once only. Results from each supplementary survey topic are released separately. A list of topics covered in recent years is in Appendix 3.

23 Tables 4.1 and 4.2 contain data from the annual supplementary surveys Underemployed Workers and Persons Not in the Labour Force. These tables are updated annually.

24 The supplementary surveys include a subset of the persons included in the LFS (see paragraph 20). The additional exclusions for most supplementary surveys are:

- persons living in private dwellings in remote and sparsely settled parts of Australia
- institutionalised persons
- boarding school pupils.

Reference period

25 Interviews are generally conducted during the two weeks beginning on the Monday between the 6th and 12th of each month, with questions relating to the week prior to the interview (the reference week).

Notes on data

26 From time to time, changes to survey methodology affect the time series produced. Some examples of changes to this survey are: new questions added to the LFS questionnaire in April 2001; and the introduction of telephone interviewing in 1996-97.

27 In February 2004 the definition of unemployed persons was changed to include all persons who were waiting to start work and were available to start in the reference week, with consequent revisions to data from April 2001 to January 2004. For further details, see **Information Paper: Forthcoming Changes to Labour Force Statistics** (cat. no. 6292.0).

Population benchmarks

28 LFS estimates of persons employed, unemployed and not in the labour force are calculated in such a way as to add up to independently estimated counts (benchmarks) of the civilian population aged 15 years and over. These benchmarks are based on census data adjusted for under-enumeration and updated for births, deaths, interstate migration, and net permanent and long-term migration. This procedure compensates for under-enumeration in the survey, and leads to more reliable estimates.

29 From February 2004, labour force estimates have been compiled using benchmarks based on the results of the 2001 Census of Population and Housing. Revisions were made to historical estimates from January 1999 to January 2004. These revisions affect original, seasonally adjusted and trend estimates. The next revision is scheduled for February 2009 to take account of the results from the 2006 census.

Families series

30 Family relationship is not determined for all households and persons in scope of the LFS. This is due to a number of factors related to the scope and coverage of the LFS, as well as difficulties in determining family structure and characteristics. The survey questions used to determine family relationships are restricted to persons enumerated as usual residents of private dwellings. That is, the following persons are excluded:

- all persons enumerated in non-private dwellings (including hotels, motels, hospitals and other institutions)
- persons enumerated as visitors to (rather than usual residents of) private dwellings.

31 In addition, in those households where it is not possible to obtain information relating to all the usual residents, no family information is recorded. Thus, persons living in households that include a member of the permanent defence forces, who is outside the scope of the LFS, are excluded from survey questions used to determine family relationships. This also applies to households that, at the time of the survey, had one or more of their usual residents away for more than six weeks, and households from which an incomplete or inadequate questionnaire was obtained for any usual resident in scope of the survey.

Further information and data on the LFS

32 LFS estimates are published monthly in **Labour Force, Australia** (cat. no. 6202.0). A series of time series spreadsheets are released at the same time as this publication under cat. no. 6202.0.55.001. More detailed estimates are released, in electronic format, one week later, under cat. no. 6291.0.55.001. All electronic data can be accessed via the ABS web site at <<https://www.abs.gov.au>>. Additional data are available on request.

33 For further information about the range of LFS products and services, and the concepts and methodology used in the LFS, refer to **Information Paper: Changes to Labour Force Survey Products** (cat. no. 6297.0), **Labour Statistics: Concepts, Sources and Methods** (cat. no. 6102.0.55.001), or contact the Assistant Director, Labour Force Survey on Canberra (02) 6252 6565.

EMPLOYER SURVEY DATA

34 Tables 2.11, 5.1-5.3, 6.1-6.2 and 7.1 of this publication contain data from ABS employer surveys.

Scope of employer surveys

35 Except where otherwise noted, the sample for ABS labour employer surveys is selected from the ABS Business Register, which is primarily based on registrations to the Australian Taxation Office's (ATO) Pay As You Go Withholding scheme. The population is updated quarterly to take account of new businesses, business that have ceased employing, changes in employment levels, changes in industry, and other general business changes. Businesses excluded from the scope of the employer surveys are:

- those primarily engaged in Agriculture, forestry and fishing (except for the Survey of Employment and Earnings)
- private households employing staff
- overseas embassies, consulates, etc.
- those located outside Australia.

JOB VACANCIES DATA

36 Table 7.1 contains data from the Job Vacancies Survey (JVS).

Description of the survey

37 The current Job Vacancies Survey has been conducted since November 1983 and is a quarterly sample survey of approximately 4,600 employers. The survey produces estimates of the number of job vacancies in Australia.

Reference date

38 The reference date for the survey is the third Friday of the middle month of the quarter.

Notes on data

39 Prior to the August quarter 1999, job vacancies statistics were collected as part of the Job Vacancies and Overtime Survey. The overtime component of the survey ceased following the May quarter 1999.

Further information

40 For further information about the range of products and services relating to ABS job vacancies statistics, and the concepts and methodology used, refer to **Job Vacancies, Australia** (cat. no. 6354.0), **Labour Statistics: Concepts, Sources and Methods** (cat. no. 6102.0.55.001), the associated time series spreadsheets available from the ABS web site, or contact the Manager, Job Vacancies Survey on Perth (08) 9360 5304.

PUBLIC SECTOR EMPLOYEES DATA

Description of the survey

41 Data in table 2.11 are obtained from a quarterly survey of public sector businesses: the Survey of Employment and Earnings - Public Sector (SEE). This survey has been conducted on a quarterly basis since the September quarter 1983. The survey measures both the number of public sector wage and salary earners employed in the middle month of each quarter and their total quarterly earnings.

Reference period

42 The reference period for employees is the last pay period ending on or before the third Friday of the middle month of the quarter. The reference period for gross earnings is all pay periods which end within the quarter.

Notes on data

43 The private sector component of the Survey of Employment and Earnings was discontinued after the December quarter 2001.

Further information

44 For further information about the range of products and services relating to public service employees, and the concepts and methodology used, refer to **Wage and Salary Earners, Public Sector, Australia** (cat. no. 6248.0.55.001), **Labour Statistics: Concepts, Sources and Methods** (cat. no. 6102.0.55.001), or contact the Manager, Survey of Employment and Earnings, Public Sector on Perth (08) 9360 3141.

AVERAGE WEEKLY EARNINGS DATA

45 Table 5.2 contains data from the Survey of Average Weekly Earnings (AWE).

Description of the survey

46 The Survey of Average Weekly Earnings has been conducted quarterly since August 1981. Approximately 4,700 businesses contribute to the survey each quarter. The purpose of the survey is to measure average gross weekly earnings per employee job in Australia.

47 Average weekly earnings statistics represent average gross (before tax) earnings of employees and do not relate to average award rates nor to the earnings of the 'average person'. Estimates of average weekly earnings are derived by dividing estimates of weekly total earnings by estimates of number of employees. Changes in the averages may be affected not only by changes in the level of earnings of employees but also by changes in the overall composition of the wage and salary earner segment of the labour force.

Reference period

48 The reference period for the survey is the last pay period ending on or before the third Friday of the middle month of the quarter. For non-weekly payrolls, businesses are asked to provide one week's portion.

Further information

49 For further information about the range of products and services relating to average weekly earnings refer to **Average Weekly Earnings, Australia** (cat. no. 6302.0), **Labour Statistics: Concepts, Sources and Methods** (cat. no. 6102.0.55.001), the associated time series spreadsheets available from the ABS web site, or contact the Manager, Survey of Average Weekly Earnings on Perth (08) 9360 5304.

WAGE PRICE INDEX DATA

50 Table 5.1 contains data from the **Labour Price Index, Australia** (cat. no. 6345.0) publication.

Description of the survey

51 The Labour Price Index measure changes in the price of labour services resulting from market pressures, and is unaffected by changes in the quality or quantity of work performed. i.e. it is unaffected by changes in the composition of the labour force, hours worked, or changes in characteristics of employees (e.g. work performance). Information about the wage price indexes has been released for each quarter since September 1997. Approximately 20, 000 matched jobs from 4,800 businesses are priced each quarter.

Reference period

52 The reference period for the survey is the last pay period ending on or before the third Friday of the mid-month of the quarter.

Further information

53 For further information about the range of products and services relating to the Wage Price Index, and the concepts and methodology used, refer to **Labour Price Index, Australia** (cat. no. 6345.0), **Labour Price Index, Statistics Concepts, Sources and Methods** (cat. no. 6351.0.55.001), the associated time series spreadsheets available from the ABS web site, or contact Tim Landrigan on Perth (08) 9360 5151.

INDUSTRIAL DISPUTES DATA

54 Tables 6.1 and 6.2 contain data from the Industrial Disputes collection.

Description of the survey

55 The ABS has been collecting information about industrial disputes since 1913. The Industrial Disputes collection produces estimates of the number of industrial disputes (where ten or more working days are lost), employees involved, and working days lost.

56 The scope of the Industrial Disputes collection is restricted to employing businesses at which an industrial dispute has occurred. For this collection, industrial disputes are defined as work stoppages of ten working days or more. Ten working days are equivalent to the amount of ordinary time worked by ten people in one day, regardless of the length of the stoppage, e.g. 3,000 workers on strike for two hours would be counted as 750 working days lost (assuming they work an eight-hour day).

57 Effects on other establishments not directly involved in the dispute, such as stand-downs because of lack of materials, disruption of transport services, power cuts, etc. are not included in the scope of this collection.

Reference period

58 The collection reference period is the calendar quarter.

Further information

59 For further information about the range of products and services relating to ABS industrial disputes statistics, and the concepts and methodology used, refer to the electronic publication **Industrial Disputes, Australia** (cat. no. 6321.0.55.001) and the associated time series spreadsheets, available from the ABS web site, **Labour Statistics: Concepts, Sources and Methods** (cat. no. 6102.0.55.001), or contact the Manager, Industrial Disputes on Perth (08) 9360 5159.

NATIONAL ACCOUNTS DATA

60 Table 5.3 contains data from the Australian National Accounts.

61 Estimates of compensation of employees are contained within the Income Accounts of the Australian National Accounts, which are published in **Australian System of National Accounts** (cat. no. 5204.0) and **Australian Economic Indicators** (cat. no. 1350.0). For further information on how estimates are obtained, see **Australian System of National Accounts: Concepts, Sources and Methods** (cat. no. 5216.0).

INTERNATIONAL DATA

62 Table 1.8 contains data from the International Labour Organisation.

63 Estimates of key indicators of the labour markets from various countries have been included for comparison with Australian estimates of labour force participation, employment, unemployment and unemployment rates.

Glossary

Active steps to find work

Includes writing, telephoning or applying in person to an employer for work; answering an advertisement for a job; checking factory noticeboards or the touchscreens at Centrelink offices; being registered with Centrelink as a jobseeker; checking or registering with any other employment agency; advertising or tendering for work; and contacting friends or relatives.

Actual hours worked

The hours actually worked during the reference week, not necessarily hours paid for.

Adult employees

Adult employees are those employees 21 years of age or over and those employees who, although under 21 years of age, are paid at the full adult rate for their occupation.

Aggregate (actual) hours worked

The total number of hours a group of employed persons has actually worked during the reference week, not necessarily hours paid for.

Attending full-time education

Persons aged 15-24 years who were enrolled full-time at secondary school, high school, Technical and Further Education (TAFE) college, university, or other educational institution in the reference week.

Average compensation per employee

National Accounts. The total compensation of employees divided by the number of employees.

Average earnings (National Accounts basis)

See **average compensation per employee**.

Average hours worked

Aggregate hours worked by a group divided by the number of persons in that group.

Average weekly earnings

Average weekly earnings represent average gross (before tax) earnings of employees and do not relate to average award rates nor to the earnings of the 'average person'. Estimates of average weekly earnings are derived by dividing estimates of weekly total earnings by estimates of number of employees. For information about scope exclusions applying to employer surveys, refer to paragraph 35 of the Explanatory Notes.

Civilian population aged 15 years and over

All usual residents of Australia aged 15 years and over except members of the permanent defence forces, certain diplomatic personnel of overseas governments customarily excluded from census and estimated population counts, overseas residents in Australia, and members of non-Australian defence forces (and their dependants) stationed in Australia.

Commonwealth government employees

Employees of all departments, agencies and authorities created by or reporting to the Commonwealth Parliament. Those bodies run jointly by the Commonwealth Government and state governments are classified to Commonwealth.

Compensation of employees

National Accounts. The total remuneration, in cash or in kind, payable by enterprises to employees in return for work done by the employees during the accounting period. Compensation of employees comprises wages and salaries (in cash and in kind) and **employers' social contributions**. Compensation of employees is not payable in respect of unpaid work undertaken voluntarily, including the work done by members of a household within an unincorporated enterprise owned by the same household. Compensation of employees excludes any taxes payable by the employer on the wage and salary bill (e.g. payroll tax, fringe benefits tax). See **Australian System of National Accounts: Concepts, Sources and Methods** (cat. no. 5216.0) for further information.

Contributing family worker

A person who works without pay, in an economic enterprise operated by a relative.

Country of birth

Classified according to the **Standard Australian Classification of Countries (SACC)** (cat. no. 1269.0).

Couple families

A family based on two persons who are in a registered or de facto marriage and who are usually resident in the same household.

Dependent child

Any child in a family under 15 years of age or aged 15-24 years who is attending full-time education (except those who have a partner or child of their own usually resident in the household).

Dependent student

A child who is 15-24 years of age, who is attending full-time education, and who has no partner or child of his or her own usually resident in the same household.

Discouraged jobseekers

Persons with marginal attachment to the labour force who wanted to work and were available to start work within the next four weeks but whose main reason for not actively looking for work was that they believed they would not find a job for any of the following reasons:

- considered to be too young/too old by employers
- lacked necessary schooling, training, skills or experience
- difficulties because of language or ethnic background
- no jobs in their locality or line of work
- no jobs available at all.

Duration of unemployment

Under the redesigned LFS questionnaire, implemented in April 2001, the definition of duration of unemployment is the period of time from when an unemployed person began looking for work, until the end of the reference week; or the period of time since an unemployed person last worked in any job for two weeks or more, until the end of the reference week; whichever was the shorter period.

Prior to April 2001, duration of unemployment was defined in the LFS as the period of time from when an unemployed person began looking for work, until the end of the reference week; or the period of time since an unemployed person last worked full-time for two weeks or more, until the end of the reference week; whichever was the shorter period.

Employed

Employed persons include all persons aged 15 years and over who, during the reference week:

- worked for one hour or more for pay, profit, commission or payment in kind in a job or business, or on a farm (comprising employees, employers and own account workers)
- worked for one hour or more without pay in a family business or on a farm (i.e. contributing family workers)
- were employees who had a job but were not at work and were
 - away from work for less than four weeks up to the end of the reference week
 - away from work for more than four weeks up to the end of the reference week and received pay for some or all of the four week period to the end of the reference week
 - away from work as a standard work or shift arrangement
 - on strike or locked out
 - on workers' compensation and expected to return to their job
- were employers or own account workers, who had a job, business or farm, but were not at work.

Employed full-time

See **full-time employed**.

Employed part-time

See **part-time employed**.

Employee

Labour Force Survey and other household surveys. A person who works for a public or private employer and receives remuneration in wages, salary, a retainer fee from their employer while working on a commission basis, tips, piece rates, or payment in kind, or a person who operates their own incorporated enterprise with or without hiring employees.

Employer surveys. Employees are wage and salary earners who received pay for any part of the reference period. For information about scope exclusions applying to employer surveys, refer to paragraph 35 of the Explanatory Notes.

Employee job

Wage Price Index. A job for which the occupant receives remuneration in wages, salary, payment in kind, or piece rates. All employee jobs in all employing organisations (except those excluded from all ABS labour employer surveys) are in scope of the WCI, except the following:

- 'non-maintainable' jobs (i.e. jobs that are expected to be occupied for less than six months of a year)
- jobs for which wages and salaries are not determined by the Australian labour market (e.g. working proprietors of small incorporated enterprises, most employees of Community Development Employment Programs, jobs where the remuneration is set in a foreign country).

For information about scope exclusions applying to employer surveys, refer to paragraph 35 of the Explanatory Notes.

Employer

Labour Force Survey and other household surveys. A person who operates their own unincorporated economic enterprise or engages independently in a profession or trade, and hires one or more employees.

Employer surveys. A business with one or more employees.

Employers' social contributions

National Accounts. Contributions by employers to pension and superannuation funds; and premiums paid by employers to workers' compensation schemes for occupational injuries and diseases.

Extended labour force underutilisation rate

The unemployed, plus the underemployed, plus two groups of marginally attached to the labour force:

- (i) persons actively looking for work, not available to start work in the reference week, but available to start work within four weeks

and
(ii) discouraged jobseekers

as a percentage of the labour force augmented by (i) and (ii).

Family

Two or more persons, one of whom is at least 15 years of age, who are related by blood, marriage (registered or de facto), adoption, step or fostering; and who are usually resident in the same household. The basis of a family is formed by identifying the presence of a couple relationship, lone parent-child relationship or other blood relationship. Some households will, therefore, contain more than one family.

Family reference person

In families which are not couple families or one-parent families, as defined, the family reference person is the eldest person in the household.

Former workers

Unemployed persons who have previously worked for two weeks or more but not in the last two years.

Full-time educational attendance

Persons aged 15-19 who, during the reference week were enrolled full-time at secondary or high schools, and those aged 15-24 who, during the reference week, were enrolled full-time at a Technical and Further Education (TAFE) college, university, or other tertiary educational institution.

Full-time employed

Household surveys. Persons employed full-time are those employed persons who usually worked 35 hours or more a week (in all jobs) and those who, although usually working less than 35 hours a week, worked 35 hours or more during the reference week.

Full-time employees

Employer surveys. Full-time employees are permanent, fixed term and casual employees who normally work the agreed or award hours for a full-time employee in their occupation and received pay for any part of the reference period. If agreed or award hours do not apply, employees are regarded as full-time if they ordinarily work 35 hours or more per week.

Gross domestic product (GDP)

National Accounts. The total market value of goods and services produced in Australia within a given period after deducting the cost of goods and services used up in the process of production but before deducting allowances for the consumption of fixed capital. Thus gross domestic product, as here defined, is at 'market prices'. It is equivalent to gross national expenditure plus exports of goods and services less imports of goods and services. See **Australian System of National Accounts: Concepts, Sources and Methods** (cat. no. 5216.0) for further information.

Gross mixed income (GMI)

National Accounts. The owners of unincorporated enterprises, or other members of their households, may work without receiving any wage or salary. Mixed income includes both **gross operating surplus** for the unincorporated enterprises and returns for the proprietors' own labour (akin to wages and salaries). See **Australian System of National Accounts: Concepts, Sources and Methods** (cat. no. 5216.0) for further information.

Gross operating surplus (GOS)

National Accounts. The amount of gross output remaining after subtracting costs incurred in producing that output, but before any deductions for consumption of fixed capital. See **Australian System of National Accounts: Concepts, Sources and Methods** (cat. no. 5216.0) for further information.

Household

A group of one or more persons in a private dwelling who consider themselves to be separate from other persons (if any) in the dwelling, and who make regular provision to take meals separately from other persons, i.e. at different times or in different rooms. Lodgers who receive accommodation but no meals are treated as separate households. Boarders who receive both accommodation and meals are not treated as separate households. A household may consist of any number of families and non-family members.

Industrial dispute

An industrial dispute is defined as a state of disagreement over an issue or group of issues between an employer and its employees, which results in employees ceasing work. Industrial disputes comprise strikes, which are a withdrawal from work by a group of employees; and lockouts, which are a refusal by an employer or group of employers to permit some or all of their employees to work.

Industry

An industry is a group of businesses or organisations that perform similar sets of activities in terms of the production of goods and services. Industry is classified according to the **Australian and New Zealand Standard Industrial Classification (ANZSIC), 1993** (cat. no. 1292.0). The industry assigned to an employed person is the industry of the organisation in which the person's main job is located. Unemployed persons who had worked for two weeks or more in the last two years are classified according to the industry of their most recent job.

Job leavers

Unemployed persons who have worked for two weeks or more in the past two years and **left that job voluntarily** - that is, because (for example): of unsatisfactory work arrangements/pay/hours; the job was a holiday job or they left the job to return to studies; or their last job was running their own business and they closed down or sold that business for reasons other than financial difficulties.

Job losers

Unemployed persons who have worked for two weeks or more in the past two years and **left that job involuntarily**: that is, they were laid off or retrenched from that job; left that job because of their own ill-health or injury; the job was seasonal or temporary; or their last job was running their own business and the business closed down because of financial difficulties.

Job vacancy

A job vacancy is an employee job available for immediate filling on the survey reference date and for which recruitment action has been taken. Recruitment action includes efforts to fill vacancies by advertising, by factory notices, by notifying public or private employment agencies or trade unions and by contacting, interviewing or selecting applicants already registered with the enterprise or organisation. Excluded are vacancies:

- for jobs which became vacant on the survey date and were filled that same day
- for jobs of less than one day's duration
- to be filled by persons already hired, or by promotion or transfer of existing employees
- to be filled by employees returning from paid or unpaid leave or after industrial dispute(s)
- not available for immediate filling on the survey reference date
- for work to be carried out by contractors
- for which no recruitment action has been taken
- where a person has been appointed but has not yet commenced duty
- to be filled by staff from contract labour agencies
- for jobs available only to persons already employed by the enterprise or organisation.

For information about scope exclusions applying to employer surveys, refer to paragraph 35 of the Explanatory Notes.

Labour force

The labour force is the labour supply available for the production of economic goods and services in a given period, and is the most widely used measure of the economically active population. Persons in the labour force are classified as either employed or unemployed according to their activities during the reference period by using a specific set of priority rules.

Labour force status

A classification of the civilian population aged 15 years and over into employed, unemployed or not in the labour force, as defined. The definitions conform closely to the international standard definitions adopted by the International Conferences of Labour Statisticians.

Labour force underutilisation rate

The unemployed plus the underemployed, as a percentage of the labour force.

Local government employees

Employees of municipalities and shires and other local authorities created by or subject to the provisions of local government legislation, such as county councils in New South Wales.

Lone parent

A person who has no spouse or partner present in the household but who forms a parent-child relationship with at least one dependent or non-dependent child usually resident in the household.

Lone person

A person who makes provision for their food and other essentials for living, without combining with any other person to form part of a multi-person household. They may live in a dwelling on their own or share a dwelling with another individual or family.

Long-term unemployed

Persons unemployed for 12 months or more. See **duration of unemployment** for details of the calculation of duration of unemployment.

Long-term unemployment rate

The number of long-term unemployed persons expressed as a percentage of the labour force.

Marginal attachment to the labour force

Persons who were not in the labour force in the reference week, wanted to work, and:

- were actively looking for work but did not meet the availability criteria to be classified as unemployed or
- were not actively looking for work but were available to start work within four weeks or could start work within four weeks if child care was available.

The criteria for determining those in the labour force are based on activity (i.e. working or looking for work) and availability to start work during the reference week. The criteria associated with marginal attachment to the labour force, in particular the concepts of wanting to work and reasons for not actively looking for work, are more subjective. Hence, the measurement against these criteria is affected by the respondent's own interpretation of the concepts used. An individual respondent's interpretation may be affected by their work aspirations, as well as family, economic and other commitments.

Marital status

See **social marital status**.

Mean age

The sum of the ages of all the persons in a group, divided by the total number of persons in that group.

Mean duration of unemployment

The sum of the duration of unemployment of all the unemployed persons in a group, divided by the total number of unemployed persons in that group.

Median age

The age which divides a group of persons into two equal groups: one comprising persons whose age is above the median; and the other, persons whose age is below it.

Median duration of unemployment

The duration which divides unemployed persons into two equal groups: one comprising persons whose duration of unemployment is above the median; and the other, persons whose duration is below it.

Non-dependent child

A child of a couple or lone parent usually resident in the household, aged over 15 years and who is not a dependent student aged 15-24 years, and who has no partner or child of their own usually resident in the household.

Non-family member

A person who is not related to any other member of the household in which they are living.

Not in the labour force

Persons who were not classified as employed or unemployed.

Occupation

An occupation is a collection of jobs that are sufficiently similar in their main tasks to be grouped together for the purposes of classification. Occupation is classified according to the **ASCO Australian Standard Classification of Occupations, Second Edition** (cat. no. 1220.0). The occupation assigned to an employed person relates to the person's main job. Unemployed persons who had worked for two weeks or more in the last two years are classified according to the occupation of their most recent job.

One-parent family

A family consisting of a lone parent with at least one dependent or non-dependent child (regardless of age) who is also usually resident in the household.

Ordinary time earnings

See **weekly ordinary time earnings**.

Original series

Estimates produced directly from the survey data, before seasonal adjustment or trend estimation takes place.

Other family

Related individuals residing in the same household who do not form a couple or parent-child relationship with any other person in the household and are not attached to a couple or one parent family in the household. If two brothers, for example, are living together and neither is a spouse, a lone parent or a child, then they are classified as other family.

Overtime earnings

See **weekly overtime earnings**.

Own-account worker

A person who operates his or her own unincorporated economic enterprise or engages independently in a profession or trade, and hires no employees.

Participation rate

The labour force participation rate for any group within the population is the labour force component of that population, expressed as a percentage of the population in that group.

Part-time employed

Household surveys. Persons employed part-time are those employed persons who usually worked less than 35 hours a week (in all jobs) and either did so during the reference week, or were not at work in the reference week.

Reason for leaving last job

Unemployed persons who had worked for two weeks or more in the past two years classified by whether they left that job voluntarily, that is, job leavers; or left that job involuntarily, that is, job losers.

Seasonally adjusted series

A time series of estimates with the estimated effects of normal seasonal variation removed. See paragraphs 7-13 of the Explanatory Notes for more detail.

Social marital status

Social marital status is the relationship status of an individual with reference to another person who is usually resident in the household. A marriage exists when two people live together as husband and wife, or partners, regardless of whether the marriage is formalised through registration. Individuals are, therefore, regarded as married if they are in a de facto marriage, or if they are living with the person to whom they are registered as married.

State capital cities

The areas determining the six state capital cities are the Statistical Divisions for those capital cities defined in the **Statistical Geography: Volume 1 - Australian Standard Geographical Classification (ASGC)** (cat. no. 1216.0).

State government employees

Employees of all State government departments and authorities created by, or reporting to, State Parliaments, including organisations for which the Commonwealth has assumed financial responsibility. Following self-government, the Northern Territory and the Australian Capital Territory administrations have been classified to State Governments. Employees of State Governments employed interstate are included in the estimates of the State in which they are based.

Status in employment

Employed persons classified by whether they were employees, employers, own account workers or contributing family workers.

Total earnings

See **weekly total earnings**.

Total hourly rates of pay index excluding bonuses

Wage Price Index. This index measures quarterly change in a weighted combination of ordinary time and overtime hourly rates of pay. See **Labour Price Index, Australia** (cat. no. 6345.0) for more information.

Trend series

A smoothed seasonally adjusted series of estimates. See paragraphs 7-13 of the Explanatory Notes for more detail.

Underemployed workers

Underemployed workers are employed persons who want, and are available for, more hours of work than they currently have. They comprise:

- persons employed part-time who want to work more hours and are available to start work with more hours, either in the reference week or in the four weeks subsequent to the survey
- persons employed full-time who worked part-time hours in the reference week for economic reasons (such as being stood down or insufficient work being available). It is assumed that these people wanted to work full-time in the reference week and would have been available to do so.

Underemployment rate

The number of underemployed workers expressed as a percentage of the labour force.

Unemployed

Persons aged 15 years and over who were not employed during the reference week, and

- had actively looked for full-time or part-time work at any time in the four weeks up to the end of the reference week and were available for work in the reference week, or
- were waiting to start a new job within four weeks from the end of the reference week and could have started in the reference week if the job had been available then.

Unemployed looking for first full-time job

Unemployed persons looking for full-time work who had never worked full-time for two weeks or more.

Unemployed looking for first job

Unemployed persons who had never worked for two weeks or more.

Unemployed looking for full-time work

Unemployed persons who:

- actively looked for full-time work, or
- were waiting to start a new full-time job.

Unemployed looking for part-time work

Unemployed persons who:

- actively looked for part-time work only, or
- were waiting to start a new part-time job.

Unemployment rate

The number of unemployed persons expressed as a percentage of the labour force.

Unemployment to population ratio

For any group, the number of unemployed persons expressed as a percentage of the civilian population aged 15 and over in the same group.

Usual hours worked

The hours usually worked per week by an employed person.

Wage and salary earners

See **employee**.

Weekly ordinary time earnings

Weekly ordinary time earnings refers to one week's earnings of employees for the reference period attributable to award, standard or agreed hours of work, calculated before taxation and any other deductions (e.g. superannuation, board and lodging) have been made. Included are piecework payments and one week's portion of regular production and task bonuses and commissions. Excluded are overtime payments and payments not related to the reference period, e.g. bonus payments for earlier periods of work.

Weekly overtime earnings

Weekly overtime earnings refers to payment for hours worked in the reference week in excess of award, standard or agreed hours of work, calculated before taxation and any other deductions (e.g. superannuation) have been made.

Weekly total earnings

Weekly total earnings of employees is equal to weekly ordinary time earnings plus weekly overtime earnings.

Working days lost

Refers to working days lost by employees directly and indirectly involved in the dispute.

Working days lost per thousand employees

Calculated for a quarterly period by dividing the total number of working days lost in the period by the total number of employees in the Australian labour force in the period (obtained from the ABS Labour Force Survey) and multiplying by 1,000.

Abbreviations

The following abbreviations have been used in this publication

ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
ASCO	Australian Standard Classification of Occupations
ASGC	Australian Standard Geographical Classification
ATO	Australian Taxation Office
AWE	average weekly earnings
EEH	Survey of Employee Earnings and Hours
GDP	gross domestic product
ID	industrial disputes
ILO	International Labour Organisation
JVS	Job Vacancies Survey
LFS	Labour Force Survey
LPI	labour price index
MPS	Monthly Population Survey
qtr	quarter
RSE	relative standard error
SACC	Standard Australian Classification of Countries
SEE	Survey of Employment and Earnings

Data Sources for Tables (Appendix)

APPENDIX 1 DATA SOURCES FOR TABLES

HOW TO FIND DATA SOURCES

To find a publication on the ABS web site, go to <<https://www.abs.gov.au>> [AusStats - Publications and Data - Publications]. Publications can be accessed by catalogue number and subject e.g. to find the publication **Labour Force, Australia** (cat. no. 6202.0), look under '62. Labour force'. Catalogue numbers are listed under the relevant subject listing.

Similarly, to find spreadsheets and data cubes, go to <<https://www.abs.gov.au>> [AusStats - Publications and Data], then [Data Cubes] or [Time Series Spreadsheets]. Individual numbered spreadsheets and data cubes are listed under the catalogue number. Monthly, quarterly and annual products are listed separately.

No.	Table description	Data source	Notes
1.1	Trend	Labour Force, Australia (cat. no. 6202.0) 6202.0.55.001 spreadsheet table 1	
1.2	Age by marital status	6291.0.55.001 spreadsheet table 1	
1.3	States and territories	Labour Force, Australia (cat. no. 6202.0) 6291.0.55.001 spreadsheet table 2	Excludes Capital city/balance of state
1.4	Educational attendance	6291.0.55.001 spreadsheet table 3	More detailed Age
1.5	Country of birth	6291.0.55.001 data cube LM4	Includes Sex, State, Less detailed Country of birth
		6291.0.55.001 data cube LM5	Includes Sex, Age, State, Less detailed Country of birth
		6291.0.55.001 data cube LM6	Includes Sex, State
		6291.0.55.001 data cube LM7	Includes Sex, State, Less detailed Country of birth
	Year of arrival	6291.0.55.001 data cube LM4	Includes Sex, State, Less detailed Country of birth
		6291.0.55.001 data cube LM7	Includes Sex, State, Less detailed Country of birth
1.6	Relationship in household	6291.0.55.001 data cube FM1 6291.0.55.001 data cube FM2 6291.0.55.001 data cube FM3 6291.0.55.001 data cube FM4	Includes State Includes Age Includes Hours worked Unemployed persons only, Includes Duration of unemployment
1.7	Families	6291.0.55.001 data cube FA2	June data only
1.8	International comparisons	International Labour Organisation, Year Book of Labour Statistics 1998, 2000, 2001 and 2002 International Labour Organisation, Key Indicators of the Labour Market 2001-02 International Labour Organisation, LABORSTA database: http://laborsta.ilo.org	
2.1	Industry: trend	6291.0.55.001 spreadsheet table 4	Includes Employed full-time, Employed part-time
2.2	Industry: divisions and subdivisions	6291.0.55.001 spreadsheet table 6 6291.0.55.001 data cube E03 6291.0.55.001 data cube E05 6291.0.55.001 data cube E06	Includes Sex, State, Hours worked, Less detailed Industry Includes Sex, Age, Status in employment, Hours worked Includes Sex, State, Status in employment, Hours worked, More detailed Industry
2.3	Occupation	6291.0.55.001 spreadsheet table 7 6291.0.55.001 spreadsheet table 12	Less detailed Occupation Includes Hours worked, Less detailed Occupation

	6291.0.55.001 data cube E07	Includes Age, Hours worked, Status in employment
	6291.0.55.001 data cube E08	Includes State, Status in employment, More detailed Occupation
2.4 Industry and Occupation by full-time part-time status	6291.0.55.001 data cube E09	Includes State, Hours worked
2.5 Industry by status in employment	6291.0.55.001 data cube E04	Includes Sex, State, Excludes Industry
	6291.0.55.001 data cube E05	Includes Sex, Age, More detailed Industry
	6291.0.55.001 data cube E06	Includes Sex, State, More detailed Industry
Occupation by status in employment	6291.0.55.001 data cube E04	Includes Sex, State, Excludes Occupation
	6291.0.55.001 data cube E07	Includes Sex, Age, More detailed Occupation
	6291.0.55.001 data cube E08	Includes Sex, State, More detailed Occupation
Hours worked in all jobs by status in employment	6291.0.55.001 spreadsheet table 8	Excludes Hours worked, Includes Sex, Employed full-time, Employed part-time
	6291.0.55.001 spreadsheet table 13	Includes Sex
	6291.0.55.001 data cube E04	Includes Sex, State
	6291.0.55.001 data cube E05	Includes Sex, Age, Industry
	6291.0.55.001 data cube E06	Includes Sex, State, Industry
	6291.0.55.001 data cube E07	Includes Sex, Age, Occupation
	6291.0.55.001 data cube E08	Includes Sex, State, Occupation
2.6 Average hours worked in all jobs by Industry	6291.0.55.001 spreadsheet table 11	
	6291.0.55.001 data cube E03	Includes State
	6291.0.55.001 data cube E05	Includes Age, Status in employment, More detailed Industry
	6291.0.55.001 data cube E06	Includes State, Status in employment, More detailed Industry
	6291.0.55.001 data cube E09	Includes State, Occupation
Average hours worked in all jobs by Occupation	6291.0.55.001 spreadsheet table 12	
	6291.0.55.001 data cube E07	Includes Age, Status in employment, More detailed Occupation
	6291.0.55.001 data cube E08	Includes State, Status in employment, More detailed Occupation
2.7 Actual hours worked in all jobs	6291.0.55.001 data cube E09	Includes State, Industry
	6291.0.55.001 spreadsheet table 9	
	6291.0.55.001 spreadsheet table 11	Includes Industry
	6291.0.55.001 spreadsheet table 12	Includes Occupation
	6291.0.55.001 spreadsheet table 13	Includes Status in employment
	6291.0.55.001 data cube EM1	Includes Age, State
	6291.0.55.001 data cube E03	Includes State, Industry
	6291.0.55.001 data cube E04	Includes State, Status in employment
2.8 Actual hours worked in all jobs	6291.0.55.001 spreadsheet table 9	
	6291.0.55.001 spreadsheet table 11	Includes Industry
	6291.0.55.001 spreadsheet table 12	Includes Occupation
	6291.0.55.001 spreadsheet table 13	Includes Status in employment
	6291.0.55.001 data cube EM1	Includes Age, State
	6291.0.55.001 data cube E03	Includes State, Industry
	6291.0.55.001 data cube E04	Includes State, Status in employment
Usual hours worked in all jobs	6291.0.55.001 spreadsheet table 10	
	6291.0.55.001 data cube EM3	Includes Age, State
	6291.0.55.001 data cube E10	Includes State, Industry
2.9 Full-time workers who worked less than 35 hours in all jobs	6291.0.55.001 data cube EM2	Includes Age, State, Hours worked
2.10 Future employment expectations by job tenure	6291.0.55.001 data cube E02	Excludes Future employment expectations, Includes State, Age
2.11 Public sector employees	Wage and Salary Earners, Public Sector, Australia (cat. no. 6248.0.55.001)	
Public sector employees: Australia Totals	6248.0.55.001 spreadsheet table 1	Includes State
Public sector employees by Level of government: Trend	6248.0.55.001 spreadsheet table 2	Includes Commonwealth government, State, Seasonally adjusted and Original data
	6248.0.55.001 spreadsheet table 3	Includes State government, State, Seasonally adjusted and Original data
	6248.0.55.001 spreadsheet table 4	Includes Local government, State, Seasonally adjusted and Original data
Public sector employees by State: Trend	6248.0.55.001 spreadsheet table 1	Includes Seasonally adjusted and Original data
	6248.0.55.001 spreadsheet table 2	Includes Commonwealth government, Seasonally adjusted and Original data
	6248.0.55.001 spreadsheet table 3	Includes State government, Seasonally adjusted and Original data
	6248.0.55.001 spreadsheet table 4	Includes Local government, Seasonally adjusted and Original data
	6248.0.55.001 spreadsheet table 7a	Includes Industry
Public sector employees by Industry: Original	6248.0.55.001 spreadsheet table 7a	Includes State
3.1 Unemployed persons: Duration of unemployment by Age	6291.0.55.001 data cube UM2	Excludes Age, Median Duration of unemployment
	6291.0.55.001 data cube UM3	Excludes Median Duration of unemployment
3.2 Long-term unemployed	6291.0.55.001 spreadsheet table 15	

	6291.0.55.001 data cube UM2	Excludes Trend data, Includes State, More detailed Duration of unemployment
	6291.0.55.001 data cube UM3	Excludes Trend data, Includes State, Age
3.3 Unemployed persons: Reason for unemployment by Industry of last job	6291.0.55.001 data cube UQ1	Excludes Industry of last job
	6291.0.55.001 data cube UQ2	Excludes Reason for unemployment
Unemployed persons: Reason for unemployment by Occupation of last job	6291.0.55.001 data cube UQ1	Excludes Occupation of last job
	6291.0.55.001 data cube UQ3	Excludes Reason for unemployment
4.1 Underutilised labour	6105.0 spreadsheet table 1	
4.2 Underutilised labour	6105.0 spreadsheet table 1	
4.3 Part-time workers	6291.0.55.001 data cube E01	Less detailed Hours worked
4.4 Persons not in the labour force	6291.0.55.001 data cube NM1	
5.1 Labour price index	Labour Price Index, Australia (cat. no. 6345.0)	
Labour price index: Trend data	6345.0 spreadsheet table 1	
Labour price index: Australia, States and territories	6345.0 spreadsheet table 2b	
Labour price index: Private sector	6345.0 spreadsheet table 3b	Includes State
Labour price index: Public sector	6345.0 spreadsheet table 4b	Includes State
Labour price index: Industry	6345.0 spreadsheet table 5b	Includes Sector
Labour price index: Occupation	6345.0 spreadsheet table 7b	Includes Sector
5.2 Average weekly earnings	Average Weekly Earnings, Australia (cat. no. 6302.0)	
Average weekly earnings by Sex	6302.0 spreadsheet table 1	Includes Full-time adult total earnings
Average weekly earnings: Private sector	6302.0 spreadsheet table 4	Includes Full-time adult total earnings
Average weekly earnings: Public sector	6302.0 spreadsheet table 7	Includes Full-time adult total earnings
5.3 Compensation of employees	Australian National Accounts: National Income, Expenditure and Product (cat. no. 5206.0)	
6.1 Industrial disputes: Working days lost	Industrial Disputes, Australia (cat. no. 6321.0.55.001)	
Industrial disputes: Working days lost by State	6321.0.55.001 spreadsheet table 3a	
Industrial disputes: Working days lost by Industry	6321.0.55.001 spreadsheet table 2a	
6.2 Industrial disputes: Working days lost per 1,000 employees	Industrial Disputes, Australia (cat. no. 6321.0.55.001)	
Industrial disputes: Working days lost per 1,000 employees by State	6321.0.55.001 spreadsheet table 3b	
Industrial disputes: Working days lost per 1,000 employees by Industry	6321.0.55.001 spreadsheet table 2b	
7.1 Job vacancies	Job Vacancies, Australia (cat. no. 6354.0)	
Job vacancies: Australia, States and Territories	6354.0 spreadsheet table 1c	

List of Articles (Appendix)

APPENDIX 2 LIST OF ARTICLES

October 2004

Changes in types of employment

Mature age people and the labour force

July 2004

Children living without an employed parent

Labour underutilisation

Spotlight: Industrial disputes

Technical report: Labour Force Survey regions

April 2004

Job search experience: methods and barriers in finding jobs

Trade union membership

Spotlight: Occupation

Technical report: Improvements to labour force estimates

January 2004

Employment in information and communication technology

Labour force participation: international comparison

Technical report: Changes to Labour Force Survey seasonal adjustment processes

October 2003

Labour market transitions of teenagers

Spotlight: Country of birth

Spotlight: Multiple job holders

Technical report: New Labour Force Survey sample selections: analysis of the effect on estimates

July 2003

Experimental volume measures of labour underutilisation

Unemployment and participation rates in Australia: a cohort analysis

Spotlight: Population, participation and productivity: contributions to Australia's economic growth

Technical report: Measures of weekly hours worked

April 2003

Do job vacancies provide a leading indicator of employment growth?

Characteristics of underemployed workers

Spotlight: Parental leave

Spotlight: Methods of setting pay

Technical report: Labour Force Survey sample redesign

Note: the following articles appeared in *Labour Force, Australia* (cat. no. 6203.0).

December 2002

Volatility of labour force estimates

October 2002

Measures of labour underutilisation

February 2002

Seasonal reanalysis of monthly labour force estimates

October 2001

Full-time and part-time employment

August 2001

Experimental estimates: labour force characteristics of Indigenous Australians

June 2001

Duration of unemployment: recent definitional changes

February 2001

Unemployment and supplementary measures of underutilised labour

May 2000

Status in employment data changes: correction

April 2000

Using the unemployment rate series to illustrate the seasonal adjustment process

December 1999

Why are there differences between two seasonally adjusted measures of Australian total employment?

November 1999

Industry, occupation and status in employment data

Related Publications (Appendix)

APPENDIX 3 RELATED PUBLICATIONS

Title	cat. no.	Frequency	Latest issue
Information papers and other reference material			
ABS Labour Market Statistics	6106.0.55.001	Irregular	2003
Australian System of National Accounts: Concepts, Sources & Methods	5216.0	Irregular	2000
Changes to Labour Force Survey Products	6297.0	Irregular	2003
Forthcoming Changes to Labour Force Statistics	6292.0	Irregular	2003
Labour Force Survey Sample Design	6269.0	Irregular	2002
Labour Force Survey Standard Errors	6298.0	Irregular	2003
Labour Price Index: Statistics Concepts, Sources & Methods	6351.0.55.001	Irregular	2004
Labour Statistics: Concepts, Sources & Methods	6102.0.55.001	Irregular	ABS web site
Questionnaires Used in the Labour Force Survey	6232.0	Irregular	2004
Labour force supplementary surveys			
Career Experience	6254.0	Irregular	Nov 2002
Child Care	4402.0	Irregular	Jun 2002
Education & Work	6227.0	Annual	May 2004
Employee Earnings, Benefits & Trade Union Membership	6310.0	Annual	Aug 2003
Forms of Employment	6359.0	Irregular	Nov 2001
Job Search Experience	6222.0	Annual	Jul 2003
Labour Force Experience	6206.0	Biennial	Feb 2003
Labour Force Status & Other Characteristics of Families(a)	6224.0	Discontinued	Final issue 2000
Labour Force Status & Other Characteristics of Migrants	6250.0	Irregular	Nov 1999
Labour Mobility	6209.0	Biennial	Feb 2004
Locations of Work	6275.0	Irregular	Jun 2000
Multiple Jobholding(b)	6216.0	Discontinued	Final issue 2000
Persons Not in the Labour Force	6220.0	Annual	Sep 2003
Retirement & Retirement Intentions	6238.0	Irregular	Nov 1997
Retrenchment & Redundancy(c)	6266.0	Discontinued	Final issue 2001
Underemployed Workers	6265.0	Annual	Sep 2003
Work-Related Injuries	6324.0	Irregular	Sep 2000
Working Arrangements	6342.0	Irregular	Nov 2003
Sub-annual labour surveys			
Average Weekly Earnings	6302.0	Quarterly	Aug 2004
Industrial Disputes	6321.0.55.001	Quarterly	Sep qtr 2004
Job Vacancies	6354.0	Quarterly	Nov 2004
Labour Force	6202.0	Monthly	Nov 2004
Labour Price Index	6345.0	Quarterly	Sep qtr 2004
Wage & Salary Earners, Public Sector	6248.0.55.001	Quarterly	Sep qtr 2004
Other labour surveys			
Employee Earnings & Hours	6306.0	Biennial	May 2002

Employer Training Expenditure & Practices	6362.0	Irregular	2001-02
Labour Costs	6348.0	Irregular	2002-03
Other publications			
Australian Economic Indicators	1350.0	Monthly	Dec 2004
Australian National Accounts: National Income, Expenditure & Product	5206.0	Quarterly	Sep 2004
Australian Social Trends	4102.0	Annual	2004
Australian System of National Accounts	5204.0	Annual	2002-03
Australians' Employment & Unemployment Patterns: First Results	6289.0	Irregular	1994 to 1996
Business Indicators	5676.0	Quarterly	Sep 2004
Census of Population & Housing: Selected Education & Labour Force Statistics	2017.0	Irregular	2001
Education & Training Indicators	4230.0	Irregular	2002
Employment Arrangements & Superannuation	6361.0	Irregular	Apr to Jun 2000
General Social Survey	4159.0	Irregular	2002
Government Benefits, Taxes & Household Income	6537.0	Irregular	1998-99
Household Income & Income Distribution	6523.0	Irregular	2002-2003
Measures of Australia's Progress	1370.0	Irregular	2004
Regional Wage & Salary Earners - Electronic Publication	5673.0	Annual	2000-01
Superannuation: Coverage & Financial Characteristics	6360.0	Irregular	Apr to Jun 2000
Voluntary Work	4441.0	Irregular	2000

(a) Latest data available via the ABS web site, and on request, for June 2003.

(b) Latest data available on request for July 2001.

(c) Related data available from Labour Mobility.

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